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Volume 58, Number 2, Formerly BIRD-LORE

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# **Thoughtful Providers**

My husband and I drive 50 miles one way to our cottage to feed the birds all winter long. We have one large feeder which holds 10 lbs. of seed and, with the suet and peanut butter puddings we put out, lasts two weeks; the last two times we've been up there, there has been a flock of redpolls in the trees which we didn't see last year.

Mrs. SYLVIA McMILLAN
Owen, Wisconsin

#### Birds With Only One Leg

In December 1955, I was doing a little birding at the Pennsylvania Flats. off Brooklyn, and found several dead gulls. One of the gulls was a mature herring gull that had only one leg. The gull hadn't been dead long and was in good feather. I examined it and could not find that it ever had but one leg. Often it is difficult even for a normal bird to survive, though perhaps less so for gulls than other birds, but I have never heard of a bird having one leg and living to maturity! At first I thought that a rat had eaten the leg, but there was no sign of that. Incidentally, the one leg it did have was frozen to the ice: whether this happened before it died or after I could not say. Neither could I say how it died. Anyway I wondered if such a thing was known to have happened before.

CORNELIUS J. WARD Astoria, L. I., New York

Mr. Ward's experience is certainly interesting, but is by no means unusual. There are other accounts of birds that have lived, for a long while, without a foot or a leg, or even without both feet. In an article, "Birds Have Accidents, Too!" Audubon Magazine, January-February 1946 issue, I cited a ring-necked pheasant that a friend of mine shot, which was in excellent flesh, yet it had no feet at all. They had been cut off cleanly, apparently by a farmer's mowing machine, and quite a long while before the pheasant had been killed, because the stubs were healed over with a tough, horny skin. The bird was shot while it was in flight. There are many other accounts of injured birds in this article - some of which recovered remarkably.

There is a recent record of a screech owl-killed by highway traffic near Mc-Connellsburg, Pennsylvania – that had only one leg, yet the owl had been making a satisfactory living. Its stomach con-

tained the remains of a white-footed mouse, and of grasshoppers, crickets, beetles, walking sticks, and other insects. This is even more remarkable than the survival of a gull with one leg, in that a predatory bird, such as a screech owl, needs and uses its feet much more in capturing, killing, and eating its prey, than do most other kinds of birds. -J. K. T.

# **Wants Correspondence**

I am anxious to find someone in your country who would care to correspond about birds. Do you know any fellow Turn to next Page

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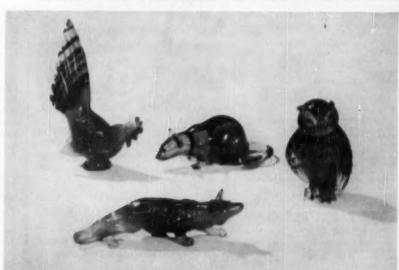
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about 30 years of age who might be interested in our birds "down under"? My correspondent does not need to be a boy, on second thought, a young woman would suit just as well. I am married and have three little daughters. I am a member of the Victorian Avicultural Society and of the Ballarat Field Naturalist's Clubs. I am deeply interested in



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### **Warning About Airport Tragedies**

Many thanks for the advance copy of the January-February 1956 Audubon Magazine which contains the article "Death in the Night," on the destruction of migrating birds at ceilometer beams.

I fervently hope that it will alert people who are interested in birds and who live near airports so that they will make personal visits to the airport to observe the ceilometer beams on danger nights of low cloud ceilings in spring and autumn.

May there never occur another such disastrous period for our migrating birds as that of the fall of 1954.

AMELIA R. LASKEY

Nashville, Tennessee

We heartily agree with Mrs. Laskey's letter, and hope that those of our readers who live near an airport that has a fixed ceilometer, will be on the lookout for any deaths of birds at the airport during the migration periods, especially in fall. Autumn is a time when the largest kills of birds have occurred at ceilometer beams during night migration. The alertness of our readers in reporting kills of birds at the ceilometer beam to the airport authorities, especially early in the evening when these tragedies first begin, may mean the saving of many birds' lives. Airport officials have been very cooperative in turning off the ceilometer light during nights of large-scale bird migrations. A list of some of the U.S. Weather Bureau Airports in the eastern United States that have fixed ceilometer beams, which may bear watching, follows this note. It is only in the eastern United States that we have had a large destruction of birds at ceilometer beams.

If the ceilometer beam at a busy airport is regularly attracting a great number of night migrants, it may mean that an ultra-violet filter is needed for use during the migration season. The general feeling is that the test-filters, at Nashville and Knoxville, Tennessee, which were not put into operation until late October 1955, need another test throughout the fall migration season in 1956, before their effectiveness may be proved. If the filters prevent birds from being killed, and yet allow the ceilometer beam to work effectively for aircraft safety, they will probably be recommended for general use .- J. K. T.

Locations, East of the 100th Meridian, of Fixed Airport Ceilometer Beams Governed by the U.S. Weather Bureau. List up to November 10, 1955. (Asterisk \* indicates Airport where ceilometer beam has either attracted or killed large numbers of birds.)

of birds.)
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Akron, Ohio
Albany, N. Y.
Allentown, Pa.
Atlanta, Ga.
Baltimore, Md.
Birmingham, Ala.
Boston, Mass.
Brownsville, Tex.
Buffalo, N. Y.
Burlington, Vt.
Charleston, S. C.
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Charleston, W. Va.
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\*Charlotte, N. C.
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Charleston, W. Va.
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(Covington)
(Covington)
(Covington)
Columbia, Mo.
Columbia, Mo.
Corpus Christi, Tex.
Dayton, Ohio
Corpus Christi, Tex.
Dayton, Ohio
Des Moines, Iowa
Detroit (Wayne County)
Duluth, Minn.
Evansville, Ind.
Fargo, N. Dak,
Fort Smith, Ark.
Fort Worth, Tex.
(Meacham)
Galveston, Tex.
(Grand Island, Nebr.
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Peoria, Ill.
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Continued on Page 56

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# Roger Peterson's B

Louis Agassiz Fuertes

T WAS just over 30 years ago, in November of 1925, that I traveled to my first A.O.U. meeting. For three days I attended the sessions which were held in the American Museum of Natural History in New York. There I met Ludlow Griscom who was then a young man with black hair, Francis Lee Jaques who had just started his distinguished career at the museum, Arthur Allen of Cornell, and even such fabulous figures as Frank Chapman and Edward Howe Forbush. But to a 17-year-old from a small town, who had never before met any of the high ornithological "brass," the climax came when I was introduced to Fuertes.

In the bird art exhibit, which was on display in one of the halls on the second floor, I had entered two of my own drawings. They were among my very first efforts-a ruby-throated hummingbird and a kingbirdwhich, I remember, took me three weeks to paint. Just what the great man said about these drawings I do not remember, but I know he was kind. I do remember that to illustrate a point he led me over to a small watercolor, not one of his own, but a study by the British painter, Archibald Thorburn, depicting a golden eagle at its eyrie. The simple point that he wished to put across to me was that a highlight on a dark plumage could actually be as light in value as a shadow on a white surface (he was a great supporter of Abbott Thayer's theory of countershading).

Later, as we walked down the broad steps to the first floor of the museum he reached into his inner coat pocket and withdrew a handful of red sable brushes. Picking out a flat one about a half inch wide he handed it to me, saying: "Take this; you will find it good for laying in background washes." I thanked him and before we parted he added: "and don't hesitate to send your drawings to me from time to time. Just address them Louis Fuertes, Ithaca, New York."

Actually, I never did send any of my drawings to him for criticism; I had decided to wait until they were

worth his time. And so, by delaying, I forfeited a priceless opportunity, for less than two years later Fuertes met his tragic death. As for the paint brush, I never used it. I had discovered some white paint caked in the heel at the base of the bristles: the master himself had actually painted with this brush. Therefore. I decided to put it aside as a treasured souvenir. Several years later, during a summer in Maine while I was working in a small makeshift studio, the brush rolled onto the floor and dropped through a crack. Later, when carpenters were repairing the building we ripped up the loose board, but no sign of the missing brush could be found. Apparently the mice had carried it away.

I have always envied George Sutton his close contact with Fuertes, for of all the young men who went to him for inspiration and advice. Fuertes gave most freely to George. Not that he withheld things from the others; certainly not, for he was completely unselfish in sharing his ideas and his tricks of the trade. But in his letters to George Sutton, he was more detailed and articulate in defining the principal tenets of his

George, however, is not the only one whose work was strongly influenced by Fuertes. In fact, the majority of younger men who paint birds today have been influenced indirectly. Not only men in their thirties like Don Eckelberry and John Henry Dick, who have already matured their own distinctive styles, but also such a gifted youngster as Robert Verity Clem, who was not even born while Fuertes was alive. We can truthfully say that there is a "Fuertes school" of bird painting, even to this day, a generation after his death.

These reminiscences about the man who is often called "the greatest artist of wild bird portraits who has ever lived" were stimulated by a new book which has just come to my desk, "Louis Agassiz Fuertes: His Life Briefly Told and His Correspondence Edited."\*

Louis Fuertes himself, for some

<sup>\*</sup> By Mary Fuertes Boynton, Oxford University Press, New York, \$7.50.

# EYE VIEW

unaccountable reason, never wrote a book, although he illustrated many, and in fact, wrote very few articles except for a brilliant series of six on his "Impressions of the Voices of Tropical Birds" in Bird-Lore (1913-1914). He seemed to mistrust his power with the written word. Actually his letters make far better reading than those of most other literate men, partly I suppose because there was no pretense about them—all bounce, vigor, and life and animated by his occasional uninhibited sketches.

As one who paints birds, and who has been much influenced by the Fuertes approach, I have devoured this book with great interest. He was born under a lucky star, there is no doubt, for at a very youthful age he was befriended and sponsored by two men of powerful influence-Abbott Thayer who shaped his thinking as an artist and Elliott Coues who promoted him in scientific circles. Interesting indeed are the buoyant accounts of his collecting trips to far places where new birds were his daily fare. Naturally, I was interested in the description of his studio, its accoutrements, and how he tackled a watercolor, but the most significant portion of the book, I think, deals with his artistic dilemma, one which has also puzzled me and which I have briefly discussed in "Birds Over America" (pages 52-53).

You see, Fuertes early fell under the influence of Abbott Thayer and his son Gerald who wrote that controversial tome "Concealing Coloration in the Animal Kingdom." This was an exposition of the "laws of disguise through color and pattern," in other words, natural camouflage. Fuertes understood this principle thoroughly and was one of Thayer's greatest defenders. He was obviously trying to indoctrinate me when he showed me Thorburn's eagle picture, and his letters to George Sutton are full of this dogma. Yet, he seldom practiced it himself, for if one were to really succeed at this kind of painting, one would not be able to see the bird for the background. During his mid-thirties his correspondence reveals the spot he was in; old Abbott Thaver berating him for

letting him down by painting birds that stood out from their surroundings, while at the same time Gilbert Grosvenor of the National Geographic and Frank Chapman of Bird-Lore sent back drawing after drawing because the bird did not stand out quite enough. In the end, and with some anguish no doubt, he was realistic enough to make his decision to emphasize the bird itself rather than its environment. Therefore he usually ignored the thirddimensional play of light and shade in favor of "local" color-a concession that most bird portraitists make to the demands of ornithological illustration.

Recently in a fine book of photographs one of the authors states, after a discussion of Audubon, that "Most subsequent painters of birds, in Europe as well as in America have sought to continue the Audubon style. With varying success they have turned out thousands of portraits in water color or in the muddy medium which in our day has come to be called 'tempera'. . . . Unable or unwilling to develop a new and fresh

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# PETER PAUL KELLOGG

President, Federation o New York State Bird Clubs





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approach, succeeding generations have produced 'imitation Audubons,' but their creators have lacked the genius and the flair of the master."

No word is mentioned of Louis Agassiz Fuertes and his contribution to bird painting. With all due respect to Audubon, I believe that Fuertes has had a far greater influence than his predecessor on the majority of contemporary bird portraitists. The author quoted above then goes on to say "this historical sketch indicates why we believe that color photography can now teach us much more about our birds than a further multiplication of painters' handiwork." I, for one, who work with both the camera and the brush, will not accept this dictum. I propose to discuss this sometime soon in this column.

#### LETTERS-Continued from Page 53

Springfield, Mo. Syracuse, N. Y. Tampa, Fla. Tenarkana, Ark. Tulsa, Okla. Toledo, Ohio Waco, Tex. Washington, D. C. (WNAP) Wichita, Kans. Williamsport, Pa. Willow Run, Mich. Winston-Salem, N. C.

#### Fruits to Attract Birds

Come spring, most of us who attract birds replace the window-sill feeding stations with screens and move our bird interest out-of-doors to the garden, nearby woods, ponds, and streams. How disappointing when the "birding days" of April and May dawn cold and wet; after experiencing too many of these days I decided to try and bring the birds of woods and garden to my winter feeding stations. This is what I did.

Upon the arrival of the rose-breasted grosbeaks I put out a good supply of sunflower seeds. The evening grosbeaks were still here eating large amounts. I thought that perhaps the rose-breasted might join his cousins. He did and held his own against the avidity of his larger relatives. There were immature and adult rose-breasteds on all of our window feeders during the wet, rainy days of May, I replenished the seed supply as many times during the day as on a snowy day in winter. The red-wings came over from the swamp, the goldfinches, grackles, and cowbirds all fed with the grosbeaks. The suet cages on the feeder were kept filled for the titmice, chickadees, and nuthatches: the catbirds joined them at the suet.

The first week of May was nearly ended when I heard an oriole. I looked out and there he was, wet and cold, on a high branch of the oak tree not far from my second-floor feeding station. Why not bring him down with a few cherries? I put a bowl of canned Bing cherries and juice on the feeder and left the window. In "jig-time" down he came, perched on the bowl, sipped the juice for a few minutes, and left with a cherry. A few mornings passed and I heard a scarlet tanager. It was raining again but he was trying to sing in a tree at the edge of the woods. Scarlet tanagers on window-sill feeders seemed a little preposterous, but why not try? There was nothing to lose; scarlet tanagers to gain. So out went a

bowl of cherries on a feeder facing the woods. The tanager came, drank juice; and ate cherries and suet from a wooden holder.

All of this happened four years ago (I keep a bird diary). In the spring of 1955, the orioles, tanagers, and rosebreasted grosbeaks, male and female, were regular visitors. Rain or shine they came in numbers and the sill feeders were in a mess with bowls of fruit cocktail, orange halves, canned pineapple chunks, cherries, orange juice, bananas, seed, and suet. The tanagers and orioles eat cherries together; the grosbeaks eat sunflower seeds, the catbird eats at the suet cage while a red-wing walks around the edge as if to look over the situation. The bird groups at my windows are unlimited in number and beauty.

You might take this idea out into the garden; fill a birdbath with halves of oranges and watch the orioles come. I have an old Indian stone once used for grinding meal which has been put out in a flower garden and filled with halved oranges. That "bird of the deep woods," the scarlet tanager, comes for his fruit in my garden as long as he stays here. Domesticating these beautiful birds is a lot of fun. Do try it.

ROBERTA S. FRANKLIN Mountain Lakes, New Jersey

# **Tobogganing Pheasants**

One winter morning, when the ground was covered with ice, 10 hen and four cock pheasants came to a small hill in our rear garden. Mr. Pheasant, in the lead, sat back on his tail, spread his legs in front of him, and slid down the slope! The rest of the flock followed suit.

ELMER L. TRIPP

Poughkeepsie. New York



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#### Letter from Germany

I have subscribed to Audubon Magazine since the January-February 1955 issue and think it is one of the best magazines of its kind. There are many articles in it that are of interest for all bird-lovers the world over.

HANS BAUMGARTEN

Holstein, Germany

# Martins That Like White

About three years ago I decided to go into the martin business. I own eleven acres on the south side of Yellow Springs and we are just now getting our vegetation after seven years of effort from an open field into a landscaped property. I rather derided the idea that a martin would care whether a martin house was painted white or was natural. Our house has natural wood and brick and I didn't want a painted house. Therefore, I left the martin house up for two years and got no martins. My neighbors told me I should paint it white and finally about the middle of May or much later than they start nesting I painted the house white on a Sunday morning. I got it up again about ten o'clock and within an hour had martins. I had another natural house I had built with no paint and a couple of weeks later I painted it white and it also soon attracted the martins.

So, there must be something to the white house but the thing that confuses me is why do they then go to the gourds, which are not white?

Both of these houses were loaded with martins this year. We had a fine season. RUSSELL B. STEWART

Yellow Springs, Ohio

The only reason we can suggest is that some martins seem conditioned to nesting in a white house, just as martins in certain parts of the South will nest only in gourds and in unpainted martin houses. We know that birds can distinguish between colors, but we can only surmise that preference for a birdhouse of a certain color is based upon the bird's familiarity with it. This appears to be the only logical answer, although birdhouses painted white are cooler in summer than unpainted houses, or those of dark colors. If martins can learn by experience, it may be that they have learned this fact, although it is difficult to believe that they choose white houses because they know that they are cooler.

-I.K.T.

#### Wisconsin Reader Inspired

Each issue of Audubon Magazine is thoroughly read and enjoyed. Some day much of this information will be passed on to the young people I will teach. I also have plans which include attending the new Audubon Camp at Sarona, Wis-ROY J. LUKES

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# THE ROAD AHEAD IN

By Paul B. Sears"

IRST of all, it is my privilege to First of all, it is in prome the American Association for the Advancement of Science and from the Yale Conservation Program. The Association for the Advancement of Science, more than a hundred years old, now numbers some 50,000 members and it is the one over-all organization devoted to the advancement of all branches of science. It includes as its affiliates or associates many special societies. In an earlier day its annual meetings were the chief means of bringing scientists together but today science has become so specialized that these various organizations frequently find it necessary to have their own separate meetings. Yet those meetings are so planned geographically that the annual meeting of the Association still gives a chance for a great many people to come together who otherwise might not have the opportunity to do so.

Now in this day of specialization the need for a more general and inclusive organization is greater than ever, and the Association devotes a great deal of quiet and inconspicuous effort towards those problems which concern science and the society which supports it. Of particular interest to members of the Audubon Society should be the fact the Association recognizes and cherishes the importance of the amateur as well as the professional. History shows that science owes a tremendous amount to the work of amateurs. The obligations of science today are becoming so great and so complex that I am sure the need for talented and interested

amateurs is going to grow instead of diminish. There are many fields in which their work is needed.

The Yale Conservation Program. which is the other organization that sends its greetings, was organized in 1950 with the assistance of the Conservation Foundation here in New York and other generous friends. It was set up as a two-year graduate course leading to the Master's degree and has to date graduated twenty-one students who are now engaged in a wide variety of activities. In addition it has helped with the training of foresters, planners, engineers, government officials-especially from abroad - and social scientists. Because it must use actual resource problems as laboratory material, it has assisted in the solution of such problems in a number of places over the country. The Program has from the first enjoyed the cordial collaboration of various schools, colleges and departments at Yale and elsewhere.

You may be interested to know that our teaching program is kept very flexible so that students may not only round out their previous education but make the best use of their talents. Conservation is a very complex matter. Our aim is to give students a clear and broad conception of resource problems and to teach them how to analyze both the scientific and the cultural elements in these problems. Any conservation problem boils down at last to a question of human values and behavior. We seek for a realistic approach to such questions, steering clear of doctrinaire and ready-made solutions. Our reward has come in the confidence of those who realize that we have no pet ax to grind.

The Program owes a particular debt to the Audubon Society. Many of our students have received early guidance as Junior Club, and later, Society members. In turn two of our graduates have done notable work in

securing and setting aside areas as wildlife preserves.

Now for a few comments which do fit the topic assigned to me. THE ROAD AHEAD IN CONSERVA-TION is a rather difficult topic because it involves prophecy. First for the road blocks. One, and I suppose in some ways the greatest, at least the most massive, is simple indifference. This is based very largely on lack of information. At least I think so, perhaps because I'm an optimist and because I have found that when people do learn about resource problems, they are anything but indifferent. Even so we have a tremendous dead weight of indifference to contend with. The other obstacle while perhaps not so massive is much more serious. I refer to a division of counsel, of belief and of philosophy among those to whom we look for advice on public problems. I wish I could tell you that every scientist in the United States is agreed that the problem of man's relation to his environment is a very serious one, that the same laws of cause and effect that apply within the laboratory are also true in the landscape. It is a very curious and disheartening phenomenon that many people highly skilled and highly conscientious in science take the attitude that as soon as they step out of the laboratory onto the landscape the rules no longer hold. The laws of cause and effect no longer apply. We can do anything that we please. In effect they say, "It makes no difference what kind of a jam we get into. We've thought up some very clever things in the past; we'll think up more in the future. And whatever hole society gets into, you can rely on us to pull you out!"

This is not said flippantly. It is a view held seriously by a considerable number of people. It extends over into the social sciences where we hear experts speak of an expand-

An address presented before the annual convention of the National Audubott Society, November 13, 1956, Dr. Scars, Profess.r of Conservation at Yale University, is President of the American Association for the Advancement of Science, and a member of the Board of Directors of the National Audubon Society.

# CONSERVATION

ing economy without ever explaining what they mean or putting any limit on the idea of expansion. Seemingly they forget the old basic law, one of the first you learn in high school physics-that two bodies cannot possibly occupy the same space at the same time. Fortunately the more experience people have in the fields of biology and geology, in short with natural history, the less likely they are to share such views. The less their knowledge of the living landscape, the more likely they are to dismiss the whole problem as something unimportant.

So much for road blocks! May I speak quite briefly of bulldozers? I see one very powerful influence at work to clear the path. I have been observing it for more than 20 years. People sometimes speak of the selfishness of business interests and the fact that they work pretty hard to exploit our natural resources. I can assure you that a counter tendency does exist. As American business is getting bigger and more permanent it is developing a greater sense of continuity and responsibility. Today some of the finest and staunchest allies we have in trying to solve the problem of man and resources are those representatives of great corporations who realize that all will not be over with when they die but must go on. Great businesses must be assured of a continuing supply of raw materials, of favorable conditions for the men who work for them, and of general prosperity. To me this is a most hopeful sign.

But where are the weapons with which we can combat indifference? Interest in conservation education is increasing rapidly all over the country. This is all to the good. I am disturbed, however, by one circumstance: everybody who graduates from an American college today has been exposed, at least, to a course in science, but I am very much afraid

that for a great many of them this is not a very convincing experience. Too many come out with an attitude of indifference. They seem not to have any conception of the intimate. inescapable relation of cause and effect that ties man to the landscape of which he is a part.

For this I have no easy remedy. The men who teach the sciences are very conscientious-could they be, in a sense, too conscientious? They suffer from an occupational disease. which is the dread fear that they won't tell everything that they know in the first year. How to break this pattern? Graduate schools are becoming more and more intensely specialized, more and more weaned away from the sort of things that you and I are interested in. These graduate schools train our college teachers. It is going to be a long, hard battle but there are leaders over the country who are concerned about it. Wherever you get a chance, be sure you lend your influence to see that the teacher who gives people their one glimpse of the world of science gives them a real interpretation, a real understanding.

Another encouraging thing is the fact that more and more in local communities, local areas, people are beginning to face their resource problems right where they live. We're having to do it in New England since the flood! But a start was made even earlier with the organization of groups in the Connecticut Valley to see and study its problems at first hand and to try to work out their solution. Certainly these are good signs.

And finally I see- I hope I seemore and more interest in what we call the intangible values. I need scarcely remind this group that the Audubon Society is par excellence a defender of intangibles.

In our study of natural resources, we deal with many things that have

# ABOUT THE AUTHOR



Photograph of Dr. Sears, courtesy of Yale University News Bureau,

Since 1951. Dr. Paul B. Sears has been a member of the Board of Directors of the National Audubon Society. He began his career in science and education as an instructor in botany at Ohio State University in 1915. Since then he has had, among other posts, a full professorship in botany at Oberlin College where he served from 1938 to 1950. Dr. Sears has been chairman of the conservation program at Yale University since 1950. He has been president of the Ecological Society of America and has held many other important scientific positions. He is a fellow of the American Association for the Advancement of Science and is now president of that society. His book, "Deserts on the March" (1935), was widely read and is considered a classic in conservation writing. It was followed by "This is Our World" (1937), and other books. Many of our readers will remember Dr. Sears' two recent articles in Audubon Magazine-"The Audubon Camp Philosophy," March-April 1954 issue, and "The Appraisal of our Natural Resources," published in the May-June 1955 issue. We are glad to bring our readers another important message from this distinguished scientist and educator.-The Editor

a clear and definite place in world economy. It is fairly easy to establish the economic importance of such things as lumber, minerals, soil and even water. The difficulty comes from trying to decide how these things should be used to insure the greatest good for the greatest number for the longest time. It is natural and reasonable to expect a man to be interested in his children, and now that I've reached the plateau on which I am, I would say, especially his grandchildren. Indeed some very tough resource problems arise from the common belief that a man's best way of looking after his own is to grab his share and convert it into



# Broad-Winged Hawk-

By The Rt. Rev. Robert Hatch

FRIEND and I were approach-A ing my camp one spring day in the lonely mountains north of New Hampshire's Presidential Range. The trail was one of those thin, brambly ones that wander off into the back country and finally lose themselves in a mass of windfalls. Our destination was a one-room scalers' camp left behind by a crew of lumberjacks who had logged the place many years before. We were traveling with well-loaded packboards and with the consoling thought that for the next few days we could stay in the woods and not see a trace of civilization.

We were filled with a sense of great well-being as we reached the clearing in front of the camp and glanced at the abandoned loggers' shack against a background of yellow birch and fir. Suddenly our eyes were fixed on a flash of motion in the tall grass of the clearing. A broad-winged hawk flew up from the grass, a mouse in its talons, and

wheeled high over the surrounding trees. Far above us it soared and cried, "K-wee-e-e-e-!" In a moment it was gone, but the grace of the soaring bird and the wild, insistent cry caught the mood of that place and seemed to express its very essence.

So it always is with the broadwinged hawk in our northern wilderness. Other wild creatures are part and parcel of the land - the bears that roam the hills, the beavers on remote ponds, the gray-cheeked thrushes near mountain summits, the goshawks that prey on snowshoe hares and partridges. But, to me, none can compare with the broad-winged hawk in capturing the mood of the northern mountains. Once you have seen them circling over a pond, or flapping from tree to tree along a brook, or uttering their cry above a mountain gorge, you associate them forever with the North Country. The freedom of that land is in their soaring flight, the wildness in their cry.

Perhaps we in New Hampshire

have no right to claim the broadwinged hawk. Its summer habitat stretches from Canada south to Florida and central Texas. Its winter range extends into Central America. and in western South America to the headwaters of the Amazon. Since the majority of these hawks winter in Central and South America, the tropics have quite as much a claim on them as do our northern New England hills. It depends on where you see them, but perhaps the land where they raise their young has the strongest claim to them. That is how we feel in New Hampshire.

Our broad-winged hawks arrive in New England in April and early May. I have seen them hunting in western Connecticut on their way north. One day in late April I saw four during a 10-mile hike. Two circled silently overhead as I wound my way along an old wagon road through the woods. One studied me from an overhanging branch. The fourth flapped along the trail ahead of me with a toad in its talons, then

settled in a tree and proceeded to tear its prey apart, giving me a memorable view of its banded tail feathers, rusty-brown front, and sharp, suspicious eyes.

In spring, my favorite spot from which to see them is a lonely peak in northwestern Connecticut, where the migrating hawks fly close to the summit when the wind is high. A clear day in the second half of April with the wind from the south or west should bring migrating broadwinged hawks. The most active times for them are in the morning, from about 9 o'clock to noon, and in the afternoon, from about 1:00 until 4:00. Sometimes the birds pass over, one by one, in an uneven stream. Sometimes they boil out of the clouds in a circling mass. Most often, since my mountain is only a minor flyway, they come a few at a time with long pauses between birds. Depending on the wind, they fly at a

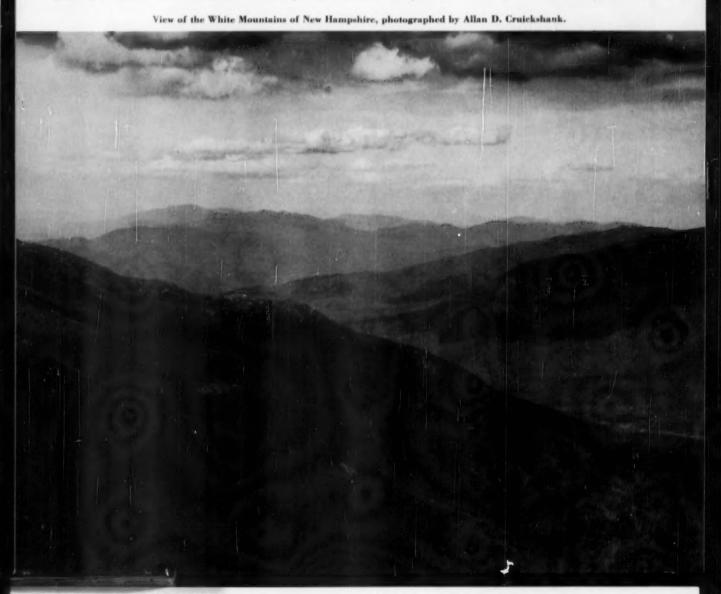
height varying from easy gunshot to distances beyond the reach of human vision. It is a thrill to pick out the tiny specks high in the sky with binoculars. On rare occasions they scream as they pass on overhead

In migration, the birds follow routes as natural as the highways of men. They fly up the valleys of great rivers. They soar over high elevations, and when the wind is right they follow mountain ridges where they can glide with the currents. Mt. Tom near Northampton, Massachusetts, is the best place to watch them migrating in New England, but there are other, wilder mountains where they can be seen in a more primitive setting.

When they reach New Hampshire they head for the back country. A few may settle near the abodes of men, but most broadwings love the wild places. Kestrels, or sparrow hawks, may choose an old maple in a pasture, red-tailed and red-shouldered hawks the woods that border farmlands, marsh hawks the marshes near country streams, but the broadwings belong to the wilderness. The deep forest, near a small pond or brook, is the likeliest place for a nest. Usually the nest is in the crotch of a tall tree. It is apt to have a careless look, made of dead sticks, twigs, and strips of bark and lined with fresh leaves. In it, two or three young are raised.

A pair built a nest close to the brook that bounds our farm in East Lancaster. All summer we watched this family. Their cries became associated with many things we didpicnics we had with our children, hikes we took on hot summer mornings, quiet afternoons when the children played in the brook.

The broad-winged hawk is a catlike hunter. It takes its place on an



overhanging branch and waits for a stir of life at the pond's edge or on the forest floor. Swift as a jet it swoops downward, snatches up its prey, and then returns to a favorite perch where the smaller victims are swallowed whole and the larger skinned and torn apart. Its diet includes toads and frogs, crayfish,

### ABOUT THE AUTHOR

Suffragan Bishop of the Episcopal Diocese of Connecticut, the Rt. Reverend Robert McConnell Hatch has written us that he gets immense pleasure from his hobby of hiking and wildlife study. Ever since boyhood he has had a great love for the woods and hills of New England. It began when he was very young and used to spend summers in northern New England. It has increased steadily up to the present time, when he spends Saturdays in the hills of northwestern Connecticut and summer vacations with his wife and two daughters at their farm in Lancaster, New Hampshire.

For a number of years, says Bishop Hatch, his primary interest was in hiking and camping. As his love for wild places deepened. his interests enlarged to include wildlife and conservation. He began to feel a growing concern for those creatures which man persecutes - mammals like the black bear, wildcat, and fox; birds like the eagles, hawks, and owls. Man's prejudice against these creatures, and his cruelty toward them, impressed Bishop Hatch as a contradiction of the religious tenets to which many human beings subscribe. He found himself engaged more and more in an effort to save these creatures and to preserve the wilderness where many of them

"Man sorely needs the aesthetic and spiritual lift that the wilderness can give," wrote Bishop Hatch, "and he will be in even greater need of it during the uncertain future than in the past. The struggle to save the more misunderstood wild creatures and the larger struggle to save great remnants of the wilderness for the joy and spiritual refreshment of our children have become an important part of my life, and an expression of my conviction that reverence for life is at the heart of true religion."-THE EDITOR

snakes, small rodents, and many insects including the caterpillars of certain moths that other birds will not touch. It is not a "chicken hawk," nor is it a regular eater of birds. That so helpful a species should be persecuted by man seems incredible, and yet—even today there are gunners who will not spare a broadwing.

In late summer our broadwings start to disappear from New Hampshire. After the middle of August a few young birds begin their journey south. By late August more have left, and by mid-September the big migration is underway. The flyways come suddenly to life, and you can see more hawks in a single day than you may ever have seen before. This is the time to visit the Hawk Mountain Sanctuary in Pennsylvania, where the flights are phenomenal. On a favorable day in September, broad-winged hawks boil out of the sky in legions, 3,000 and 4,000 in a day, in one of nature's most breathtaking spectacles.

I always find September a depressing time of year because the broadwinged hawks that have added so much of life to our New Hampshire woods, have left us. After they have gone, the woods seem desolate. I visit a lonely pond and remember the young broad-winged hawk that spent August there catching dragonflies, I bushwhack through a wild, loggedover area in the back woods and recall the pair that circled slowly overhead, piercing the silence with their plaintive "K-wee-e-e-e-" Looking down from the summit of a wilderness cliff. I can all but see the adult bird that used to wheel over

the gorge below, its banded tail flashing against the background of firs and spruces beyond.

There are glories in this search for hawks, and there are tragedies, too. I have always felt that this is as it should be, because nature's glory is never far removed from its essential tragedy. Like every other creature of the wild, the broadwinged hawk has its enemies. Greatest enemy by far is still the man with a gun, but there are also natural enemies. One day in September I heard that a goshawk had been seen on a lonely stretch of railroad a few miles from Lancaster. Friends had seen the large gray bird several times in a swampy section that abounds in snowshoe hares and partridges. I went to the spot in the hope of seeing it, following the railroad track far back into the woods. I did not see the goshawk, but I found evidence that even a hawk is not immune to nature's law of kill and be killed. A short distance from the railroad were the remains of an adult broadwing, one wing torn off, the head devoured. Somewhere in those woods the goshawk was concealed.

I paused for a moment and reflected on the irony of chance. Only a small amount of time needed to have passed before the broadwinged would have been flying south, far from the land of goshawks. Already a cold wind was blowing from the north, and there was frost on the higher peaks.

I removed the beautifully banded tail feathers and placed them in my pack as reminders of a season that was over. Days later, the last of the broadwings had left.—THE END

Eggs of broad-winged hawk, photographed by Samuel A. Grimes.





Broad-winged hawk (immature), photographed by G. Ronald Austing.

This is a mother's appealing account of how she learned to identify birds. We believe that many of our readers will re-live their own early struggles with field identification of birds while reading Mrs. Bullard's story. Two boys—her son, and her son's dearest friend—taught her what she calls "the beginning of a lifetime avocation."—The Editor

# By Mabel Elizabeth Bullard (Part 1)

H OW did it all begin? Was it the day that my son Arthur came breathlessly in and begged to borrow my field glasses? I suppose that day was really the logical beginning, I was sitting at the kitchen table in our Connecticut home writing in my journal. At the time, it was a day-by-day "philosophy of living" but it has since become more of a nature journal. Besides being May 1, it was my birthday.

Suddenly the door burst open and Arthur flew in, which is just a little out of character for him. He is usually pretty placid and not unduly excitable.



"Suddenly the door burst open and Arthur flew in . . . "

"Please Mommy, let me take your binoculars! There's a bird migration going on and I'll be very careful of them, but please, please, please, say yes!"

I looked at my son, with wonder. Where had he heard of bird migrations?

"Why certainly, you may use the binoculars," I said. "They were

# Johnny 7. AND THE BIRDS

Illustrations by Herbert Fennell

bought for all the family to enjoy. But what made you aware that birds are migrating?"

For this I got one of those looks, filled with infinite pity, that says that people in their right minds know the birds are migrating. You just know, that's all. With the usual amount of motherly admonitions about being careful of the glasses, etc., I saw him off.

I turned back to my journal, but my heart was no longer in moralizing and philosophizing. I was thinking about the birds: the skies probably filled with them now, and the trees soon to be inhabited by the ones that would remain near us for the summer.

What had happened to the birds and to me? Not every household is equipped with binoculars. Mine had been bought at great sacrifice, because I wanted, at the time, to study the birds about me. I tried to remember exactly when I had made the resolve and had gotten the glasses. I still cannot recall. I suppose it is not really important. The important thing was that it was spring. Until Arthur had carried them off, they had been gathering dust in a drawer.

Every woman suffers a touch of melancholia on her birthday. It is not necessarily that she regrets growing older. I think rather it is because she is caught for a moment in time, looking both ways. Looking back, she can see her accomplishments, dimmed always a little by the number of things she meant to do, but has never found time for. Ahead, she can visualize the endless chores she must attend to, till the end of her days, with a little time perhaps, dear God, to do a few of the things her heart yearns over.

So I stood at the window looking out, and if wood thrush had sung at that moment I should have burst with emotion. But a very domestic robin dropped down on the lawn and tugged at a worm and I was reminded that, birthday or not, there were chores to be done.

I had no premonition then that I was on the threshold of a summer that would be more enjoyable than any I had spent since I was a little girl wandering through the acres of woodland in back of our home, making friends with the plants and the creatures there. It would be nice to report that I learned them all by name then, and that I developed a backlog of nature-lore to astound the experts. But I did not. I knew only the commonest objects of nature by their commonest local names. What I did learn was a reverence and awe for the simple beauty to be found in nature. Everything there seemed so good, so wholesome, and so right. It wasn't necessary to name the plants and animals then, only to watch them with wonder and to feel the close companionship of nature all around me.

But enjoyable this past summer was, and frustrating at times, too. If I was sometimes bone-weary and discouraged, at least I was never bored. Sometimes I would rather have spent an afternoon surveying nature from my own backyard, but when my young companions clamored for a trip to one of their favorite birding places, I was always compensated by some pleasant incident. There is no such thing as a completely fruitless field trip.

The next two weeks, according to my journal, life did little to start me on my way. Indeed, I was unaware then that Fate had plans in store for me that would take me off my usual well-worn paths, and introduce me to wonders I had no idea existed. For 10 days I made no mention in my journal of even walking out of the house to observe the weather, much less, nature. On May 12 I wrote that I had just finished

reading "Seven Steeples," by Margaret Henrichsen, and was reading Peterson's "Birds Over America" with my son Arthur. Mother had given me her copy of "Seven Steeples" to read, making some very pointed comments on the author's frequent references to the birds. Is it not true that mothers have an uncanny way of reading our minds? Is it not true also, that Fate keeps nudging us on to do the things we want most to do, while we procrastinate for no sensible reason?

It is good to note that five days later, I made my first entry on actually going out to see the birds. Can I have been in a torpor all that time? I wonder now what took me so long to get moving on the thing that I was busy convincing myself that I wanted more than anything else to do! Perhaps the weather was stormy. At any rate, I had rather think so than to believe I am a person of such slothful indecision.

Even then, I approached the whole project with the utmost caution. Listen to my journal speaking: "I am not being caught in the web of bird-watching, but I am appending a list of 'birds seen'... just for fun.

"1. Philadelphia vireo—identification quite certain." (It was not quite certain at all; in fact, I am now so convinced that it was not a Philadelphia vireo that I have removed it from my list.)

"2. Eastern kingbird—in the thick growth by the river." (Well, good! I must actually have walked all the way over to the river.)

"3. Brown thrasher—singing madly at 6 a.m. and all through the day. When I first saw him he was perched on the highest slender twig of a giant maple, swinging and singing." (Something urged me to get up at 6 a.m. so perhaps there is yet some hope for me.)

"4. Downy woodpecker - hard at work high on a telephone pole. I have a pair as regular winter visitors so this is no stranger to me."

Now I was really on my way, but that day's journal entry was special for another reason. For into our company was introduced one of the most interesting young persons I have ever met. My son, Arthur, had been meeting him regularly over by the river and had brought him home once or twice. At any rate, I had known him just long enough to be impressed. The journal says: "Ar-

thur has a grand new friend—an intelligent boy and a bird watcher. This new friend shall in the future be herein referred to as Johnny F., and I suspect I shall mention him often, for I find him most interesting and refreshing, extremely modest, and quick of wit. He is sixteen as compared to Arthur's eleven years, so it is remarkable that he bothers about the little fellow. Arthur is quite intense about his bird-listing and enjoys the opportunity to go tramping daily in good company."

I enjoyed, equally as much, the opportunity to talk over the phenomena of nature with a person of considerable background of authoritative information, for Johnny F. had already read a wealth of nature lore and backed some of it up with his own observations in the field. One of the things about him that impressed Arthur most at first was that Johnny F. had a goodly nature library of his own. "He must have about twenty books, and they are all his own!" Arthur exclaimed to me, quite obviously impressed. I have suspected many times since that Arthur's estimate, quite out of line with his usual policy, was probably conservative.

At first there was a mild conspiracy by Arthur and Johnny F. to get me (Mother) interested in bird-watching again, and the deliciously savored experience of "catching" her out with the glasses and a field guide before breakfast. My journal entry for May 19 says: Arthur was tickled to watch me slyly from his window and we are 'oh, so close' in our secret. He promises not to tell anyone but Johnny F. And I was rewarded and my list starts to grow."

While I was busy making a few changes in my regular activities to make room for something I had wanted to do for years, Arthur was all at once catapulted into a new all-consuming interest. It was a new experience in friendship, and even a fairly new relationship with Mother, who had before been a provider and confidant, but not regarded as a necessary companion. Each day now brought the spirited reading aloud of his list, which grew amazingly. If I was at times just a little annoyed at its repetition, I am sure it was only a human failing and not a lack of parental interest. My own list grew more slowly, and

at the end of May stood at 51. Arthur's was closer to 100.

Arthur wanted every facet of his life to reflect his new-found occupation. One night he came into my sewing room with the request that I make him a sign for his bedroom, which was to be the headquarters for the activities of the bird-watcher's society.

"What shall we call it?" he wanted to know.

"How about 'Ornithologist's Corner,' "I suggested.

"Hey, that's swell!" he said, looking at me with a new kind of respect. Apparently Mom was not as much of a "square" as he sometimes suspected. That kind of thing always sets me up about 10 pegs. I was reduced to my usual dimensions later when Johnny F. pointed out that I had spelled it "ornothologist."



"Later, Johnny F. pointed out that I had spelled it 'ornothologist'..."

A few nights later, when Arthur came home from Johnny F's, he handed me the "Constitution of the Ornithologist's Corner" to type. It was well constructed, if a little blunt. In the article on membership it said, "The membership body reserves the right to expulsion of undesirables. This does not apply to the two charter members." It announced that "Field trips occur on our schedule regularly" and "Guests are also welcome on field trips."

After a little pressure on my part, I was installed as an honorary member and later elected as secretary. Also, in view of the fact that I am the only member who drives, I am unofficial chief-in-charge of transportation. Since we meet most times in my kitchen, I am also chairman of the refreshment committee.

(To be continued in the next issue)



All photographs of the ringtail (Bassiriscus) by William M. Rush.

# The Handsome Little

# RINGTAIL

# By Norman G. Woolsey

ONE Christmas eve, the Pitt family that lives on the side of Camelback Mountain near Phoenix, Arizona, were gathered around their Christmas tree, opening gifts, and awaiting Christmas guests. Suddenly some packages tumbled from a shelf in the darkened corner of their living room. Thinking the boxes had been improperly stacked the Pitts replaced them. Seconds later the boxes again fell. Switching on an overhead light, the family got the surprise of their lives. An unscheduled furry guest, with bright "night" eyes blinked at them in wonderment, then all 21/2 pounds of it swished down the hall and into the base-

The pleasant and ordinarily shy

little visitor to the Pitt family was a wild ringtail, or Bassariscus, which they thought must have fallen into the house through a grating. The Pitts say that the ringtail must have liked the apples and other edibles it found, for even though they left the door open, it refused to leave. It remained hidden out of reach behind the furnace in the basement. It slept during the day, but came out at night to collect food, then returned to its cache in cozy comfort. The Pitts grew fond of it and considered it a permanent member of the family.

The ringtail or ringtail-cat as it is sometimes called, is named for its long, bushy tail which has seven black and white bars across it. In parts of the country it is also called cacomistle, coon-cat, civet cat, and bassarisk. Its scientific name is Bassariscus astutus, and it is in a family by itself (Bassariscidae), which is between the raccoons and weasel families. Considered by many the most appealing of all our furry mammals, the ringtail has the face of a fox and the body of a buffy-gray marten. Its tail is the approximate length of the head and body, and the broad, black bands give the ringtail a conspicuous and fascinating appearance shared by no other North American animal.

Although the ringtail is a common resident over a great part of the southwestern United States and southward to Costa Rica, few persons have ever seen it. Normally it is exceedingly shy, keeps to dark crevices and caves, and preys on mice and wood rats. Miners and ranchers of the Southwest frequently capture the cacomistle when young and it quickly becomes a useful pet in destroying rats and mice.

A few summers ago while working as a forest guard in the Mogollon Mountains of New Mexico, I had an opportunity to become quite well acquainted with this animal. I first noticed the presence of this little night fellow by seeing its small catlike, five-toed tracks around the cabin yard one morning. Although ringtails were quite common in the Lower Sonoran and Transition life zones. I was somewhat surprised to find them at elevation 7,500 feet, in the yellow pine and aspen belts. The next few days I encouraged the animal's company by leaving scraps of meat and fruit in a coffee can at the doorstep. In the morning the can would be cleaned of its contents but the interesting little mammal would leave before daylight.

Two weeks passed before I got my first look at the ringtail. I had left the door open and had purposely placed the coffee can, filled with scraps, on the threshold. About dusk I lit the lantern and sat facing the door from a darkened far corner of the cabin. At length I heard the coffee can rattle. As I glanced up I saw a delicately-pointed face watching me curiously. Its eyes, accentuated by whitish circles around

them, gave its fox-like face an appearance of being all eyes. Suddenly it flipped its barred tail and scampered away. It stopped just beyond the ring of lantern light, and peeked back furtively at me.

I sat very quietly for perhaps five minutes, and soon it was back. This time it got hold of the can with its teeth and pulled it out the door, where it dropped it with a clatter, spilling the bits of food. The noise didn't alarm the ringtail greatly, and presently it was back, crunching the food greedily. As the days passed it became braver, until at last, it was entering the cabin and hunting bits of food under the table and searching the cupboard and shelves for other delicacies. With its now nightly presence in the cabin, I noticed the sudden disappearance of some mice that had been eating my food supplies.

Though the little ringtail never allowed me to pet it, it became so tame that it would leap upon my bunk in a playful manner and run across my feet. Then with a cat's springy grace it would jump to the window sill, then on the cabin wall, where it would cling without effort and switch its long tail back and forth in a manner that suggested it was completely happy in its new home.

In the latter part of July, the summer rains came and I was released from my position as fire guard. Before leaving the isolated moun-



tain cabin, I cut a hole  $2\frac{1}{2}$  inches in diameter in the floor, large enough for my pet to come in and to go. On the inside of the door, before I left, I tacked a note:

"There's a pet ringtail that uses the cabin. Treat him to scraps and he'll repay by destroying rats."

What disposition was made of my pet I never knew until two years ago, when mostly by chance, I was in the area and visited the old forest cabin. A college student had taken over as forest guard during the summer, and when I told him about a pet ringtail that used to frequent the place, he pointed to a box in the corner. There dozing cozily on some old clothing were a family of four cacomistles. No doubt these were all progeny of my pet, of former years, which through gradual trust and kindness by man, had grown to be as tame as any domestic pet.

The cacomistle's young are born in May or June, usually two to four in number. The den site almost always is in some crevice high up on the face of a bluff, but occasionally its dens have been found in hollow trees. The ringtail, with its semiretractible claws and the springy, curved, hind legs of a cat, is as much at home in the trees as in the bluffs. The ringtail's thick fur is golden brown on the back to light-gray on

the underparts, and is used by some furriers. Economically, it is much more valuable in rodent control than as a furbearer, and its unique and appealing ways make it a highly desirable pet.

Owls are probably the most serious of the ringtail's natural enemies, the chief reason being that the cacomistle hunts only at night. It never strays far from its natural habitat of bluffs and trees. Snakes, too, probably take young ringtails

during the ringtail's denning season.

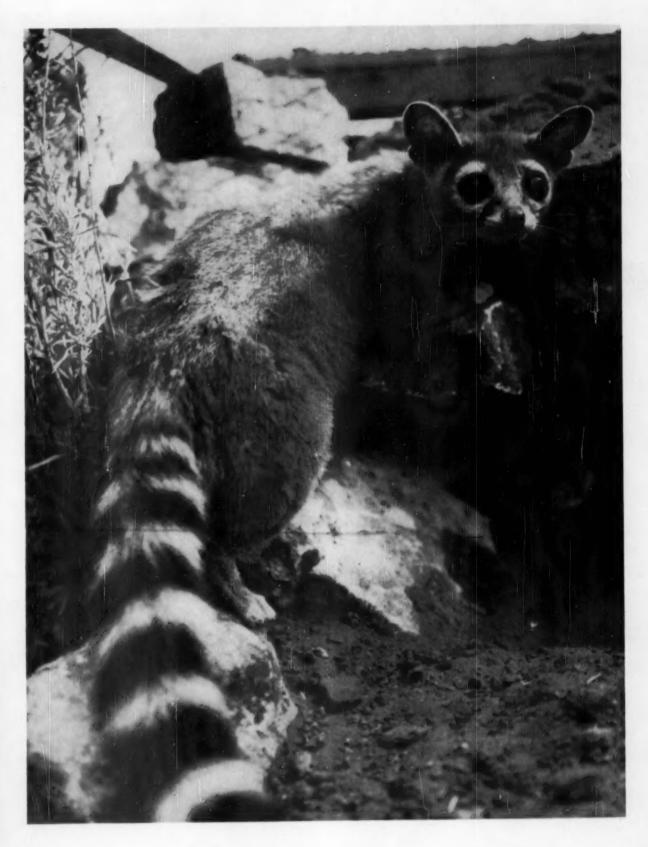
The presence of the ringtail in southwestern areas of the United States always is a source of deep interest to the naturalist who is fortunate enough to see this shy and handsome furbearer as it streaks up and over the bluffs and cliffs in the bright moonlight. You can be sure that it strikes terror to rats and mice as there, under the desert stars, it enacts the time-old battle of the hunter and the hunted. —THE END

The ringtail, Bassariscus astutus, is one of the most winsome of all wild mammals. Although it lives over a wide area of the western United States and south to Costa Rica, few people have ever seen one. It is usually quite shy, lives in and about dark caves, and does most of its hunting at night.

Mexicans call the ringtail the Aztec name of cacomixtle; in Baja California it is called babisuri. It is often called civet cat, in the Southwest, but it is a very different animal from the civet of the Old World, which, phylogenetically, is close to the felines, or true cats. Scientists place the ringtail in a family by itself—Bassariscidae—between the raccoons and coatis (Procyonidae), and the marten,

weasels, etc. (Mustelidae). This agile creature is as much at home in trees as it is on the ground. Other local names for it are mountain cat, miner's cat, and cat squirrel. The common name of "cat squirrel" is an even greater misnaming of this animal than "cat." The ringtail is not at all related to the squirrel family. There is already a common name of "cat squirrel" that has been given locally to the southern gray squirrel. Ringtail seems to be far and away the best common name for this beautiful little animal. In the United States, it lives from Oregon southward into California. and eastward into Nevada, Utah, western Colorado, Arizona, New Mexico, and Texas.-The Editor







Grasshopper sparrow standing on the edge of her nest, which she is about to leave. The scientific name of this Florida subspecies is Ammodramus savannarum floridanus.

All photographs by the author.

2 The nest, which Wray Nicholson found on the Kissimmee Prairie, contained four eggs.



3 The grasshopper sparrow, perched on a saw palmetto leaf, was on her way to her nest.



# A PICTURE STORY

The Florida grasshopper sparrow is one of the birds that people may see on the Audubon Wildlife Tour to the Kissimmee Prairie, Florida. This tour, conducted by Alexander Sprunt, Jr., originates in Okeechobee City.

# By Hugo H. Schroder

THIS subspecies of the eastern grasshopper sparrow was first described by Doctor Mearns in 1902, from a pair taken on the Kissimmee Prairie, seven miles east of Alligator Bluff. It eluded the efforts of collectors to get additional specimens until the spring of 1929 when a small colony was located on the Prairie, about eight miles southwest of Kenansville, Florida. •

On April 17, 1932, Joseph C. Howell, Jr. of Orlando, and myself hunted half a day in this prairie area. Florida grasshopper sparrows were quite commonly seen and heard. We found a newly built nest that day. On May 1, 1932, in company with Joseph C. Howell, Jr., Donald J. Nicholson, and Wray H. Nicholson we thoroughly combed the same area there. Within five minutes of where we stopped our car, Donald Nicholson found the first nest; it contained two eggs. Later I found a nest just built. A half hour later Wray Nicholson found a nest with four eggs (see photograph #2). This nest was built on the ground alongside a small palmetto, and this is the usual sort of nest. Many more nests were found in this area later, on other trips by Wray Nicholson and myself.

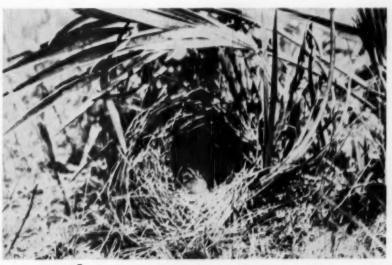
I tried, at quite a number of nests, to get photographs of the female incubating her eggs, but all of the birds failed to return to the nests while I was near. One day I set up my camera at a nest where I saw a female. I ran a string to our car, about 50 feet distant, and I had not long to wait until this bird returned to the nest; I pulled the string and got the photograph #1, reproduced on the opposite page. When I went to change film and reset the camera, this bird just hopped from the nest and remained nearby while I adjusted the camera. After that I just Continued on Page 92



4 Sometimes the bird approached her nest from the opposite side.



5 Here she looked suspiciously at the photographer.



6 Finally she settled down to incubate her four eggs.

<sup>\*</sup> See account, pp. 468-489, in "Florida Bird Life," by Alexander Sprunt, Jr., Coward-McCann, Inc., N. Y. 1954.

# Why Preserve Natural Areas?

# By Adele Erisman

THE day I visited Dr. William Niering and his girl students, they were just finishing a survey of the plants growing on the top of a 50-foot high cliff. The cliff is within the 100-acre "natural area" of the arboretum at Connecticut College for Women in New London.

There were five girls with Dr. Niering—a professor of botany—and they were dressed in tough leather boots, dungarees, and bright-colored shirts. Each of them carried knapsacks that held measuring tapes, metal stakes, charts, compasses, cameras, and lunches. After putting on a map the names and locations of each species of plant on the cliff, its abundance or rarity, and its height and diameter, they slipped and skidded down to a ravine to continue their work.

Two of the girls paired off as teams, the other worked with Dr. Niering. While one called off the Latin names of the plants, the other recorded and mapped them on her chart. Their work was done so accurately that it will be possible later for other students to check on growth and changes in the same territory at intervals of 10 to 20 years.

Certainly the future value of the data being gathered here offers a prospect exciting enough to carry the students through what must at times be a real physical ordeal. On the steaming hot June morning when I went with them—as I swiped helplessly at mosquitoes and commiserated with one of the girls whose pretty smile was distorted with poison ivy swelling—I was assured of my good luck in having come on an "easy" day, the one before having been spent in a laurel thicket—a type

of cover I have always been quite willing to leave to grouse, which seem to like it.

The students are obviously stimulated by this chance to take part in making a detailed record of changes in plant succession in an undisturbed area. Whereas in the past we have seen the different vegetational stages in different places, going, of necessity, from one type to another, from a grassy area to one covered with shrubs, and so on, such observation has supplied no exact knowledge of what has actually happened to produce these changes in a specific place. In what way has a certain thicket become a woodland? What plants give way to others and under what soil and light conditions, and what animals have accompanied the changes, with what effect? Since we now know little more than the names of the vast majority of plants and animals that live here with us, and since their unknown potentialities are limitless, we can look for important discoveries as this kind of painstaking work continues over the years.

Dr. Niering pointed out that one immediate benefit of the survey will be the cataloging of all the plant species found in the area, along with a description of plant communities, a matter of great interest to nature students, amateur and professional alike.

Foresters will certainly have a better guide for their cutting programs when they can work with more knowledge of natural forest successions in a known area; of what can ultimately be expected from a certain type of woodland; of how long it will take to reach its climax growth. This knowledge can be obtained only from long-term studies

under undisturbed conditions in a "natural area"—which term, by the way, is used to describe any piece of land set aside to be kept forever free of ax, saw, fire, plow, bulldozer, poison spray, and other such mancontrolled modifiers of the environment.

The hundred-acre "natural area" of the arboretum includes a variety of vegetational types from upland oak forest, with scattered young hemlock, to rocky wooded ravines, open fields and swamps, all of which has been marked off in a system of transect lines running east and west at 400 foot intervals, each line from 700 to over 1,000 feet long. Permanent markers have been placed every 50 feet. As work progresses the area is redivided into quadrats about 10 x 10 feet on each side of these lines. The chart for each 10 x 10 foot quadrat contains a map divided into four 21/2 foot squares upon which the girls indicate locations of salient features such as rock outcroppings, trees, shrubs, and logs.

Observations recorded on the charts include an accurate estimate of the density of herbaceous cover, both ground and overhead (the tree canopy is easily measured with the "cover sight," a gadget that enables the user to walk along the tapeline and note the tree cover for the different species above without looking up); an allocation of space to even so small a thing as one fern frond; a note on the prevalence of tree seedlings, some too small to identify surely; a description of topography and elevation (permanent blackand-white photographs have been taken); geologic formations; height and diameter of trees; number of stems in each shrub, its height and location; species of all trees, herbs, lichens, grasses, sedges, mosses; logs and rock outcrops-all these are described and recorded.

Further work is planned to include a small mammal and an insect study, as well as a history of the past use of the land.

Along with their vegetational survey, Dr. Niering's group has also made a breeding bird census covering the same area. On bi-weekly walks during May and June, they start at 4:30 a.m., before the day's work on the survey begins at 8 o'clock. They have recorded birds seen, and singing males heard,



Dr. Niering (at right) supervised the plant census. While one girl called off the scientific names, another mapped them on her chart. The future value of the data gathered offers a prospect exciting enough to carry the students through any physical discomfort.

Photographs by William A. Niering.

checking their locations on maps of the area, one to each bird. Every week a different colored dot has been used. The results, correlating with the vegetational survey, should show us, at some future time, just what changes in bird abundance, distribution, species, and nesting habits, may accompany changes in plant life.

Although the survey at the Connecticut arboretum is perhaps one of the few of its wide scope now being conducted, we can expect other scientific institutions to make similar studies wherever the trained personnel, the funds, and the inspiration can be summoned.

One possible source of the funds, and certainly of the inspiration and the personnel, will be that organization called the Nature Conservancy. Formerly known as the Ecologists' Union, the Conservancy was formed by zoologists, biologists, and botanists, but is now open to everybody. It is non-profit, tax-exempt, has national headquarters in Washington, D. C., and is in turn part of an international organization of the same name already functioning in Holland; England, and several other countries.

Its first aim is to preserve areas where rare forms of native plant and animal life are in immediate danger of extermination. In order to do this it must first conduct surveys to discover the few tracts of representative native vegetation that still remain in their original, unspoiled condition. Typical areas of grassland, desert, coastal tidal marsh, upland forest, sand plains, swamps, cedar bog, black spruce bog, and limestone areas will be important. The tracts should be of sufficient size in order to allow for an adequate "buffer zone," otherwise building developments or other disturbances that are too near, might ruin the areas.

The Conservancy is equally concerned with protecting enough areas in all sections of the country to assure "a touch of wilderness" for future generations, a chance for every citizen in years to come to have some close contact with the land in all its original, unsullied beauty. This means that land types other than those mentioned will have to be protected, areas that have been more or less disturbed in

the past but that still have features worth saving-concentrations of rare wildflowers, for example.

The Conservancy plans that some of the areas in blocks of about 100 acres or more, may have restricted recreational use without destroying their essential wildness. A minimum of unmarked trails (guidebooks would be substituted for trail signs) would constitute the only man-made disturbance through strictly wild areas.

Preservation of these lands is to be accomplished by any one of a variety of means. In all it will be necessary to insure legal protection. Much of the land that will finally become "natural areas" will be donated in the form of outright gifts from present landowners, who will perhaps retain use of the land till the death of its present occupants, while keeping it essentially undisturbed. A maintenance fund will be desirable along with the gift of the land to cover taxes; for maintaining trails; possibly for fencing where necessary; for posting; for publishing reports about the area; and for, let us hope, an occasional repetition of such studies as the one here re-

Dr. Richard Goodwin, head of the botany department at Connecticut College, who also heads the Connecticut branch of the Nature Conservancy, has formed a committee now working on a survey in Connecticut to locate and describe areas in the state worth preserving. Results of the survey will be presented in a report to the Natural Resources Council of Connecticut.

In addition to the natural area at the Connecticut arboretum, the Audubon Center of the National Audubon Society, at Greenwich, Connecticut, has set aside a 40-acre natural area for detailed study. The Massachusetts Audubon Society, in the Arcadia Sanctuary at Northampton, under Ed Mason's direction, has a comparable area where check studies will be made from time to time. In New York State, protection of the Sunken Forest on Fire Island is an immediate aim of the Conservancy, toward which it is working along with a number of other conservation groups. In fact a survey of the whole Atlantic coast will be undertaken by the Conservancy when it has raised the money needed to do the job.

The Western Pennsylvania Conservancy, under the direction of Dr. Graham Netting of Pittsburgh, has established the Jennings Blazing Star Prairie in Butler County, Pa. This area was obtained with the aid of local garden clubs who raised half the funds, the other half contributed by the Conservancy. Twenty-five cent parking fees are being charged there to help pay taxes.

In the Midwest, branches of the Nature Conservancy have been active in preserving the vanishing prairie and forest lands in Wisconsin and Iowa. Organizations with the same objectives in Indiana and Illinois are working to save the dunes on the south shore of Lake Michigan. In the Far West, the sugar pine portion of the Calaveras region in California that contains the largest specimens of sugar pine in existence has been turned over to the U.S. Forest Service.

Another activity of the Conservancy in the interests of conservation is the sponsorship of a \$500 scholarship entitled "The Relation of Human Population to Nature Conservation." This is aimed at getting scientists to direct their interests toward one of the greatest problems confronting our civilization.

This gives only an idea of the scope of their interests but it is enough to make us grateful to these scientists for enlisting public support for a militant holding action. We need no longer sit back and mourn the last acre of virgin land in many states, nor stand by helplessly watching the destruction of one natural beauty spot after another, wringing our hands while the pace of that destruction accelerates. Certainly garden clubs and Audubon clubs will want to aid the program, while other civic groups, including businessmen's and sportsmen's clubs, will undoubtedly become interested. An inquiry addressed to the Nature Conservancy, 1840 Mintwood Place, N. W., Washington 9, D. C., will bring full information. Many states have already formed branch organizations at colleges and universities. Their members will be glad to advise on acquisition of any properties that are suggested to them.

-THE END

# The Cattle Egret in Africa

An authority on the cattle egret in Africa suggests its probable migration route to America.

# By James P. Chapin

N TODAY'S mail we received the two copies of the Audubon Magazine with the excellent articles on the African cattle egret.\*

From the day when I first heard of the single specimen of Bubulcus ibis collected by Emmet R. Blake in British Guiana, \*\* I have wondered how the cattle egret made its way across the Atlantic. Never have I heard of its being kept as a domestic pet in Africa. Barring some escape from a South American zoo, I should assume it must have managed to fly from the region of Senegal westward across the Atlantic. It is known as a straggler from the Cape Verde Islands. During World War II, I was assured by Colonel J. N. Tomlinson, then the British Government representative on Ascension Island that he had seen a white heron at that remote spot and felt sure it was an African cattle egret. He had lived in Rhodesia and was well-acquainted with the species. To reach Ascension would require a flight of 800 miles at least over the ocean. When I read Mr. Haverschmidt's article in The Auk, \*\*\* telling of the disappearance of cattle egrets from the coastal area of Surinam between April and November, I suspected that they must migrate northwestward before nesting, for such behavior would agree with that of the birds in Africa north of the equator. Several years ago I was pleased to see a cattle egret at its nest in British Guiana in a film made there by Dick Bird.

With regard to the origin and

development of migrations, it would seem most interesting that cattle egrets in various parts of their range exhibit every step from a wholly sedentary life to a highly migratory condition. In Lower Egypt and probably on Sao Tome and Mauritius, the species is resident. South African birds move relatively little, for they seem scarcely to reach the equator. Those of the Sudan cross the equator and travel some 10 degrees to the south of it. Now the birds of the

#### About Dr. Chapin

On December 31, 1948, Dr. James P. Chapin, Associate Curator in the Department of Birds, American Museum of Natural History, New York City, retired after 43 years of service to the museum. A world's authority on African birds, Dr. Chapin wrote a fourvolume work, "Birds of the Bel-gian Congo," published by the American Museum of Natural History, which is a standard reference of its kind. On Dr. Chapin's retirement, in recognition of his achievements, the Board of Trustees of the museum appointed him Associate Curator Emeritus of Birds; Research Associate in African ornithology. For an account of Dr. Chapin's life and work, see an article, "On the Trail of Congo Jim," Audubon Magazine, July-August 1946 issue.

Shortly after his retirement, Dr. Chapin, who had spent eight years in Africa, returned to the Belgian Congo as research consultant to the Belgian government for L'Institut pour la Recherche Scientifique en Afrique Centrale, an organization known as IRSAC. Dr. Chapin and his wife are now living at Buhavu, Belgian Congo, Africa.-The Editor

American tropics are invading the North Temperate Zone. All this shows how migration may originate within the tropics as a response to seasonal drought rather than to cold and finally develop into a long-range movement so timed as to avoid cold weather and to take advantage of a great extension of range during the summer of the Temperate Zone. So far as known, the various populations of cattle egrets exhibit no difference in size or wing proportions.

By an interesting coincidence we watched in late April 1954, the first cattle egrets seen at Tshibati Farm since our arrival here two and onehalf years ago. These attractive birds are a familiar sight down around the shores of Lake Kivu and even at Lwiro, only 900 feet lower than this farm. Tshibati is situated at 6,400 feet, and though it has a fine herd of Jersey milk cows and half-a-dozen riding horses, the cattle herons thus far have seemed to avoid it.

Just at this season [latter part of April], as I know from long experience, cattle herons are migrating northward across the forested equatorial belt of the Congo toward their breeding area in the Sudan. Possibly that is why they have suddenly appeared at Tshibati. On April 29, 1954 there were eight in the pastures with the cows, and none of them was yet in nuptial plumage. It is also possible that these were newcomers from the south.

I do not know of any breeding colony of cattle herons in the vicinity of Lake Kivu, yet after the migrants have left for the Sudan there will be others feeding with the cattle and roosting by hundreds in reedy bays of the lake. They will also be in the white off-season dress, at least until the month of September, when apparently they start moving toward southern Africa preparatory to nesting there. This region of equatorial Africa (Tshibati is at 2° 14' S. lat.) appears to receive non-breeding cattle egrets coming at opposite seasons from two hemispheres. The same is true at Luholela near the Middle Congo and in the Kasai District of the southern Belgian Congo.

The birds that nest in the Sudan afterwards move southward across the forests of the equator and reach the Katanga and Angola. But those nesting in southern Africa migrate northward and stop along the southern margin of the forest belt, though

Continued on Page 88

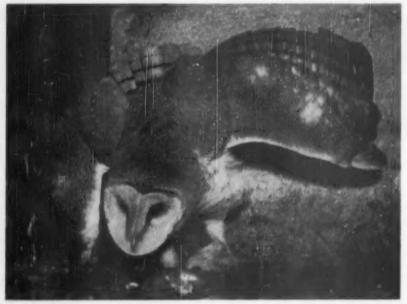
<sup>\*</sup> Previous articles about the cattle egret that have appeared in issues of Audubon Magasine are: "Newcomer From the Old World," by Alexander Sprunt, Jr., July-August 1953; and "The Cattle Egret in South America," by F. Haverschmidt, September-October 1953.

\*\* See The Auk, 1939, pp. 470-471.

\*\* The Auk, 1950, pp. 380-381.

# THE OWL AND

Photographs by the author.



"Like the tenement dwellers of a city, these barn owls lived amid the noise and smoke of a railroad."

"Under them, the Santa Fe streamliner—which makes several daily runs between Los Angeles and San Diego—thunders by."



# By Arthur L. Center

I N THE open brush country, 15 miles north of San Diego, California, near the Marine Corps Rifle Range, a barn owl has chosen to nest under an automobile overpass that crosses a branch of the Sante Fe Railroad. Over the brooding owls pass automobile traffic. Beneath them the Sante Fe streamliner which makes several daily runs between Los Angeles and San Diegothunders by. You wouldn't think that a bird known for its love of silence would pick such a spot as a train trestle where the noise of trains below, automobiles above, and gunfire in the distance isn't exactly ideal for serenity. Yet that is where our pair of barn owls has made its home.

Like the old tenement dwellers of city slums, the owls live amid the noise and smoke of the railroads; but unlike human beings, this pair had no desire to improve their living conditions. In a make-shift home composed of a few sticks, feathers, bones, and refuse too big to be eaten, the two barn owls appear to live in contentment and peace — that is — while the tracks below it are silent.

However, as they hear, perhaps by some supersonic device, long before human ears can hear it, the iron horse coming, the brooding owl lifts its head, flaps its wings in greeting, and shrieks along with the train whistle. This unique ceremony continues until the train passes. Then the owl returns to its life of perching on an iron beam or sitting on its nest until the next train is due.

An old legend of the ancient Tuscans credits the owl with guiding the souls of men to Paradise. It would be pleasant to believe that perhaps these barn owls, which aid the farmers by devouring rats, gophers, and other small destroyers of crop, are in their peculiar antics, wishing and aiding the passengers safe journey to their destinations.

-THE END



Photograph of American baldpate by Allan D. Cruickshank.

# How to Score with a 'Scope

# By Henry Harford

THE stooped man with the furrowed brow is not elderly; he is merely trying to see water birds. In this posture, he will observe neither long nor well. After awhile, he will be unable to see anything much, and, after a little longer time, he will be too uncomfortable to care much what he sees.

The unhappy man, peering through his eyebrows and through his telescope, is neither standing, sitting, kneeling, nor squatting. He is the victim of his tripod. Most tripods, of the type light and simple enough to be carried afield, will extend only to a certain height, usually too low for most observers. Any scope mounted thereon is literally a pain in the neck to a birder who is six-feet tall, or more.

The uncomfortably positioned bird watcher's lists will grow, if he will attach to his tripod some extension gadget similar to the one pictured.\* Since modern scopes are designed with long, eye-relief, he may stand erect, relaxed, and unsquinting—just as if no instrument were between himself and the bird he is watching. Vision becomes clear, comfortable, and uncurtailed by fatigue, and joys of birding are no longer marred by the discomforts of a fixed tripod.

—THE END



The uncomfortable position that a tall person must take when the tripod is not adjustable vertically.

Photographs by the author.

Here, with a vertical adjustment on the tripod, the viewer can watch birds at his case.



<sup>\*</sup> There is an aluminum tripod available called the Elevator Junior that has a vertically extensible head. This head, to which the telescope can be attached, can be run up to the height of the observer's eyes, by means of a small crank. Prices for it may be obtained by writing to dealers in camera supplies,—The Editor



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How to Attract Birds



of the Orange-Crowned Warbler

### By Doris C. Hauser

"HE dingiest of all warblers" is Poger Tory Peterson's description of the orange-crowned warbler in his "Field Guide to the Birds," but familiarity forces me to a different opinion.

This warbler is known as a nesting bird in northwestern Canada and Alaska, and it may have been the distance from which it came to winter in my yard in Gainesville, Florida, that lent a particular enchantment to it.\*

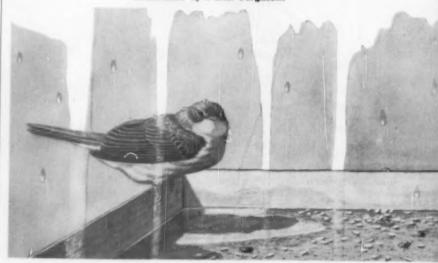
\*The eastern orange-crowned warbler, Vermitors celate celate, migrates in the fall southeastward through the United States to its wintering range along the South Atlantic and Gulf Coasts. Although it usually winters from South Carolina to Florida and Louisiana, there are recent winter records for it along the Atlantic Coast north to New England and New York. The main migration route is through the Mississippi Valley—southeastward in fall, northwestward in spring.—The Editor

Certainly, in the company of the other more colorful members of the warbler family with whom I first saw one, the orange-crowned was a nondescript bird. In succeeding bands of migrating warblers which fed in the pines and oak trees in my yard through the early weeks of December 1952, there were always at least two orange-crowned warblers.

This drab, olive-green bird, whose only touch of real color is the lemon vellow of its under tail coverts, travels from its summer breeding grounds in western Canada, and Alaska, crosses the Mississippi River, and winters in the southeastern part of our country.

The thermometer registered 27 degrees on December 16, 1952, when the orange-crowned warbler became a regu-

Illustration by Walter Ferguson.



lar visitor to my feeding trays. It first ate bread crumbs until it discovered the melted suet mix which I prepare for the birds. Through the past two winters, I have been able to count on seeing an orange-crowned warbler at a feeder almost every 25 minutes each day, although it was not until late December of 1953 that I saw two at the same time.

In addition to feeding regularly at the trays, the bird fed also on tiny insects which it found along the stalks and branches of the oaks, pear, and plum trees, the honeysuckle vines, and the crepe myrtle and pyracantha shrubs.

Modest and retiring, this bird is not particularly shy or fearful of either man or other birds. It preferred to feed alone, coming in somewhat later than the moment announced as "Dinner!" by the screaming blue jays, to which most of the other birds responded. The warbler disliked sharing the window tray with either chipping or English sparrows, and often, with tail up, wings dropped and spread, and bill open, chased them from the tray. The only bath I saw it take was shared with a half-dozen chipping sparrows on December 28, 1953, a clear and balmy day.

Frequently the orange-crowned would feed in peace with a pine, palm, and yellow-throated warbler, but quite as frequently, it would attack, or be attacked by the other warbler.

The wing-flicking habit of the rubycrowned kinglet is also a characteristic of this warbler, though to a lesser degree, while feeding. At rest, it is exceedingly still for a warbler.

One peculiarity of the bird interested me very much as I observed it throughout both winters. On rainy days, when the plumage of all other visiting birds was bedraggled and drenched, the orange-crowned warbler appeared dry and smooth. Drops of water lay like jewels on its head and back and rolled off without leaving any dampened effect.

In 1953, an orange-crowned warbler began to visit the feeders on October 30. By the end of November, when I heard the call of the tufted titmouse, I could find, in the same oak tree, or in the bird yard at feeders, the titmice, a female downy woodpecker, a yellow-throated warbler, and the orange-

crowned. These birds fed as a group, with a ruby-crowned kinglet often present until the end of December. On the 30th of December, I first saw two orange-crowned warblers at the same time, but they were far from friendly since one attacked the other when it got as close as six inches of where it was feeding.

By the middle of February, of both 1953 and 1954, the myrtle warblers that had wintered in the vicinity began to come to the feeders in great numbers. For weeks there were as many as 40 on the window tray alone, everyone of which seemed pugnacious and ill-tempered.

Their arrival forced the departure of my other warblers, and except for brief and stealthy visits, I did not see the orange-crowned warblers again until April 2 of each year. Last year it was only a glimpse, but this year the warbler, perhaps comprehending the departure of the great bulk of myrtle warblers, returned to the yard and fed through the day.

While it perched and fed at the window, I re-examined the bird and found that the approach of spring had brushed a soft yellow sheen over all the body feathers, like the bloom of a peach. The top of the head had a pale yellow glow which faded out, giving way to gray at the collar, but there was no hint of the orange crown which I have never seen. The tail and wing feathers were a richer "olive drab" than during the winter, and the tiny eye-ring, and bar over the eye were more evident than ever before.

"The dingiest of all warblers"? Well, perhaps, but today, ready to start north, the orange-crowned warbler shone with the luster of springtime.

-THE END

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money. Still tougher problems arise because the claims of remote descendants we shall never see, to say nothing of claims of the descendants of others, seem pale and vague beside the problems of today. Even so, when we are dealing with natural resources that are tangible, that can be weighed and measured, we have some basis for sensible discussion of their past, their present, and their future.

But our toughest problems of all are those which have to do with intangible values—beauty, leisure, enjoyment of nature, and our fellow

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TAYLOR TRADING COMPANY White Lake, Wis. beings. Yet if one looks back over history he finds that cultures and nations are chiefly esteemed for those things which money cannot measure -justice, beauty, and the love of truth-which somehow these peoples of the past have found means to express and make permanent. The same thing is true of individuals. It is the judgment of my friends who have the gift of acquiring riches that it is just that, a gift, no more to be explained than the gift of composing music or of winning a race. There are many formulas for becoming wealthy but the one thing they have in common is that none of them is wholly true, and while the gift of riches may be envied, or even admired, the men who have it would be the first to admit that it is a source of warm esteem chiefly as it may be used in the creation or preservation of intangible values. And vet how we have to twist and turn to defend these intangible values when natural resources are threatened! In order to get a hearing we must show how much money people spend for fishing tackle, for photography, for gasoline, for vacationfood and lodging. If we get down to the real essentials, and argue for the preservation of nature because it is a good thing, we are accused of being sentimental and impractical.

A school administrator in the West, or a scientist in the Lake States, who dares protest against expansion regardless of consequences is as poor an insurance risk as a wife who happened to displease Henry VIII.

To my mind the great virtue of the National Audubon Society is its dedication to preserving the intangible values of our continent at a time when these values are under almost intolerable pressure. Sitting, as I have been privileged to do, with your Board of Directors. I have seen a group of men and women of power, distinction, and talent devoting their energy to the effective defense of intangibles. When a species is threatened with extermination or an area with ruin, when the average person is likely to say, "Who gives a damn?", these Directors acting for all of you whom they represent are always ready to say, "We do!" and to back it up with deeds. I can speak freely because my role in the farflung and impressive activities of the National Audubon Society has necessarily been a minor one. But in case you do not know it. I can assure you that those who organize, direct, and execute its affairs are giving you the benefit of abilities which any organization, business, industrial or public, would give its eye teeth to command. So long as such a situation is possible perhaps we need not worry too much about placing a cash value on those things which make life worth living. -THE END

### New Wilderness Area

More than half a million acres within the Teton National Forest in western Wyoming has been designated as the Teton Wilderness Area by the U.S. Department of Agriculture.

Teton Wilderness Area straddles the Continental Divide and is adjacent to Yellowstone National Park. The area will be managed so as to preserve its natural primitive conditions. No roads, sales of timber, or other activities contrary to this objective will be authorized. The area is extensively used by recreationists who prefer back-country wilder-

ness unmodified by artificial influences.

The new wilderness area, comprising 563,000 acres, was established October 10, 1955 by order of Assistant Secretary E. L. Peterson. The action was taken on recommendation of the Forest Service, following discussions of the proposal with local interested groups.

The Teton Wilderness Area will be part of a system of nearly 80 areas totaling more than 14,000,000 acres within the national forests which the Department of Agriculture has set aside for preservation as wilderness.—The Editor



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# In the Beginning—

# An Early History of Our Origin and Growth

Part VI

Editors' Note: We believe that our readers will be interested in reading a republication of a report, "History of the Audubon Movement," by William Dutcher, which appeared in the January-February 1905 issue of Bird-Lore, the predecessor of Audubon Magazine. It tells of the origins and early growth of the Audubon movement, which culminated in the incorporation of the National Association of Audubon Societies in 1905. Later on, the name was changed to National Audubon Society. Since the 1905 issue is unavailable to most of our readers, we are reprinting this report in installments in this and forthcoming issues of Audubon Magazine.

#### Decline of the First Audubon Movement

DURING 1888 the tide of bird protection was rapidly ebbing, for the subject seemed to be given little attention in the public press. Forest and Stream' pointed to the fact that large numbers of song birds were shot during the spring migration in the vicinity of New York, notwithstanding the law forbidding shooting of such birds and, in an editorial in November, said as follows: "Essays have been written to demonstrate the foolishness of small bird destruction, laws have been passed to protect the useful species, societies have organized and tens of thousands of members enrolled pledged against the fatuous fashion of wearing bird skins as dress; arguments, pleas, appeals to reason and appeals to sentiment have been urged; and what is the outcome of it all? Fashion decrees feathers; and feathers it is. The headgear of women is made up in as large a degree as ever before of the various parts of small birds. Thousands and millions of birds are displayed in every conceivable shape on the hats and bonnets. This condition of affairs must be something of a shock to the leaders of the Audubon Society, who were sanguine enough to believe that the moral idea represented by their movement would be efficacious to influence society at large. Meantime the reintroduction of feather millinery in no way derogates from the value of the work done by the Audubon Society. It has called attention to the ethical and economic aspects of the question and has educated a very respectable minority to organized action. In the face of this minority thoroughly convinced that indulgence in feather millinery is wrong in itself, or conducive to consequences inimical to human well-being, the arbiters of fashion cannot achieve that complete success they have been accustomed to look for." With the end of the second volume, December, 1888, the Audubon Magazine ceased to exist and, with it, organized effort for bird protection.

At the sixth annual meeting of the

American Ornithologists' Union a very brief statement of the work of the Protection Committee was made by Dr. J. A. Allen, in the absence of the chairman, Mr. Sennett. "Efforts were being made to influence legislation and the Committee was trying to enlighten the public."

Turn to next Page

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During 1889 the subject received no attention from the press, and at the Seventh Congress of the A. O. U., held November 12-15, Mr. Sennett, chairman of the Protection Committee, made a very brief verbal report of progress, the most important statement being that the law recently enacted by the State of Pennsylvania, in a measure through the influence of the Committee, was commended as the best thus far adopted.

The report of the A. O. U. Protection Committee, made by Mr. Sennett, chairman, at the Eighth Congress, November 18-20, 1890, merely referred to the fact that no additional legislation had been obtained, but there was a general feeling manifested to protect song birds.

At the Ninth Congress of the A. O. U., November 17-19, 1891, the chairman, Mr. Sennett, merely reported progress, and Mr. Brewster stated what had been done to protect the Terns on Muskeget Island (Mass.) during the past four years.

The Protection Committee did not make any report to the American Ornithologists' Union during the years 1892 and 1893. At the Eleventh Congress, 1894, Mr. F. M. Chapman was appointed chairman of the Committee.

At the Twelfth Congress the chairman, Mr. Chapman, in his report detailed the special protection given to the Terns on Great Gull Island, N. Y., to prevent their extermination, and also the successful efforts of Messrs. Brewster and Mackay to prevent the repeal of the Massachusetts law protecting the Terns of Muskeget Island. The Committee was continued and, Mr. Chapman declining the chairmanship, Mr. Gurdon Trumbull was made chairman.

At the Thirteenth Congress, Nov. 12-14, 1895, Mr. Brewster stated, in behalf of the Protection Committee, that the Terns on Muskeget Island showed great increase, as did the colony of Laughing Gulls; and that great credit was due Mr. George H. Mackay for his continuous efforts to save these birds from destruction. Messrs. Stone and Dutcher reported on the protection given to the coast birds in New Jersey and New York. A new committee was appointed, consisting of William Dutcher, chairman, Ruthven Deane, Witmer Stone, Leverett M. Loomis and George H. Mackay.

At the close of the year 1895 the low tide of bird protection had come and the end of the first cycle was at hand. The A. O. U. Protection Committee was discouraged and hopeless, feather-wearing was as rampant as ever, the legislatures of the states of New York and Pennsylvania, where the model law had been enacted, had amended or repealed

# **Hunting and Fishing Survey**

The Fish and Wildlife Service of the Department of Interior has signed a contract, involving \$134,000 cost, to have a survey made of the economics of sport hunting and fishing activities. The Secretary of the Interior has been quoted as stating, "The aim is to aid fishermen and hunters." It is our understanding that the primary motivation of this survey is a desire to be in a position to more effectively counter the representations of the Engineers and the Reclamation Bureau as to dollar benefits of engineering structures such as dams. Our feeling is that, helpful as this current survey may be in that regard, it fails to take into account the fact that there are a great many more people interested in recreational and other uses of the out-of-doors than hunters and fishermen alone, and that it would be not only more appropriate but much more significant if the survey were to cover the economic benefits produced by all. Others spend a lot of money, too, on camping, boating, picnicking, photography, observation of wildlife, and similar nonconsumptive uses. They, too, use cars, gasoline, rubber, food, restaurants, hotels, motels, etc. In the last analysis, there is reason to question whether the dollar economic benefits, no matter how calculated, and no matter how stable the dollar in purchasing power, should govern. There are incalculable intangible benefits of which we are all aware, which should certainly be taken additionally into account if the governmental policies that may be based on such survey are to be in the best interests of the people as a whole.- JOHN H. BAKER

the same, and bird legislation was as defective as it was before the protection movement began; the Audubon Society had practically ceased to exist, and the "Audubon Magazine" was no longer published. Truly it might be said that the cause of bird protection seemed hopeless, for the movement that had started so brilliantly in 1883 was seemingly dead after a short career of twelve years. An analysis of the cause of the decline points to the following reason: the movement was started and carried on as a single society, the expenses of the same being borne by a liberal and public-spirited corporation that was organized for another purpose. The magnitude of the undertaking was too great for any person or corporation to carry on unaided, the actual physical labor and the great expense were beyond the strength or purse of anything but a cooperative movement among the several states and the contributions of hundreds of individuals. There was also a total lack of supporting laws, nor was the warden system adopted during the first movement.

#### NEW ORNITHOLOGY RESEARCH CENTER

New resources for bird study will be made possible by a \$100,000 ornithology center to be built next spring in Cornell University's Sapsucker Woods, three miles from the campus center at Ithaca, New York

An observation room, with picture windows overlooking a pond, woods, and bird feeding stations, will connect with a new ranch-type building containing offices, laboratories, and workrooms.

Generations of ornithology students have used Sapsucker Woods, but the University acquired it only last year through gifts by the families of Lyman K. Stuart, Cornell '21, of Newark, N. Y., and Walter Heasley '30 of Ithaca. .

Sapsucker Woods was named in 1909 for the yellow-bellied sapsuckers which nest there. The area is noted for plants and birds more common to Canada than to the Ithaca area.

Among its more than 80 nesting species are Canada warblers, northern water-thrushes, ruffed grouse, pileated woodpeckers, and red-shouldered hawks.

Four miles of trails are open to students, scientists, and visitors. The trails also provide fire protection and attract birds that prefer "edge" areas.

The building will house an aviary, a sound room for the Cornell Library of Natural Sounds, and for making the Cornell phonograph records, a darkroom for photographic work, and laboratories, offices, and a library-reading room. A small outdoor classroom will face the feeding stations.

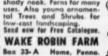
A classification of "Members of the Laboratory" has been established to include alumni or others who wish to do research on birds or to sponsor such research projects. There are already more than 100 such members.

The Laboratory of Ornithology, for 40 years a unit under the entomology, zoology, and conservation departments successively, is now an independent department of the university. It is selfsupporting through the Cornell Trust for Ornithology, which receives gifts and the royalties from Cornell's bird song records.

Professor Peter Paul Kellogg and Professor Emeritus Arthur A. Allen are codirectors of the laboratory. Its policies are guided by an advisory council appointed by the University board of trustees and responsible to President Dean W. Malott.

Council members are A. H. Peterson, director of finance at Cornell, representing President Malott; E. L. Palmer, professor emeritus of rural education; Gustav Swanson, head of the conservation department, and True McLean, professor of electrical engineering, for the faculty; and Mrs. Stuart, Mrs. Francis Scheetz of (15 West Old Gulph Road) Gladwyne, Pa., and Crawford Greenewalt of Wilmington, Del., representing Cornell alumni and other friends of the laboratory.-The Editor

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#### THE BIRDS OF MASSACHUSETTS:

An Annotated and Revised Checklist By Ludlow Griscom and Dorothy E. Snyder, Peabody Museum of Salem, Mass., 1955. 8 x 5½ in., 295 pp. Map end papers. Indexed. Hard-cover book, \$4.95; paper-covered, \$3.75.

Gilbert White once wrote "All nature is so full that that district produces the greatest variety which is the most examined." Certainly, of all the 48 states, Massachusetts has been the most examined, and now, in this compact paper-covered volume, prepared by the dean of American field ornithologists, Ludlow Griscom, and his skilled lieutenant, Dorothy Snyder, we have a report which brings things up to date. To the dyed-in-the-wool birder it makes fascinating reading, for it is a digest of the experiences of thousands of watchers over a period of 125 years.

Much has happened since Forbush's three great volumes appeared, but these two scholarly workers, in addition to collating the mass of new material, have also given Forbush a thorough screening, eliminating records that seem the least bit questionable. They have outlined their criteria for the acceptance of records and have eliminated those which do not meet these requirements, or else have relegated them to the hypothetical list. Up to 1955 a total of 430 birds (384 species plus 46 additional subspecies) have been authenticated in Massachusetts, plus 51 hypothetical or probable species.

The authors state that the chief contribution of this book is "to put on record, for the first and possibly the last time, the hitherto unpublished resources of the truly great collections" (the number of specimens in each collection is indicated at the end of each species account). But this is too modest an appraisal. Equally important are the analyses of the trends-the increases or declines over a span of a century and the probable causes of these changes in bird populations. There is much here that has a bearing on our philosophy of wildlife conservation. I have never examined a more thoughtful or more critically accurate checklist for any state. -R. T. Peterson

RECENT STUDIES IN AVIAN BIOLOGY

Edited by Albert Wolfson, University of Illinois Press, Urbana, 1955. 101/4 x 7 in., 479 pp. Illustrated. Indexed. \$7.50.

In this book sponsored by the American Ornithologists' Union each chapter is an up-to-date summary, by an expert in his field, of an aspect of bird biology -all the way from classification to diseases and including paleontology, anatomy, behavior, navigation, migration, breeding, and population dynamics. Each chapter could serve as an outline for a book on the subject-hence the term "summary," which is possibly misleading. Each study is long enough to give a general idea of the problems involved, a review of the progress in ornithological knowledge, and a definition of the latest theories advanced. Each chapter is followed by an excellent bibliography. If ever a book on a specialized subject came as an answer to the prayers of researchers and students, this

#### CELEBRATED AMERICAN CAVES

Edited by Charles E. Mohr and Howard N. Sloane, Rutgers University Press, New Brunswick, New Jersey, 1955. 854 x 554 in., 339 pp. Illustrated. Indexed. \$5.00.

To the layman whose experience with caves has been confined to visiting with a guide an occasional commercialized cave during a summer vacation, this book will be a revelation. He will remember the awesome and mysterious beauty that he found in remote darkness; he will marvel at the courage of explorers whose curiosity leads them to dangerous descents into the unknown: he will imagine himself doing underground diving in search of new approaches to caverns of ice or fire, glimpsing the homes of millions of bats and strange, rare, eyeless creatures. Every chapter is a dramatic adventure. But this volume is intriguing for still other reasons. Will there ever be answers to some of the puzzles raised in it. Who was the "leather man"? Who carved the idol of the Cuban cave? Whose were the skeletons of the Mother Lode? Above all, why do men take such risks as they must to enter this underground world

of legend and history? No doubt the answer to this fast question is the same as that given by the Everest climbers— "because it is there."

OUR DAILY POISON: THE EFFECTS OF DDT, FLUORIDES, HORMONES AND OTHER CHEMICALS ON MODERN MAN By Leonard Wickenden, Devin-Adair, New York, 1955. 81/4 x 51/2 in., 178 pp. Indexed. \$3.00.

For many years now we have been led to believe that our lives, our health, and our morale can be improved by various chemicals. Sprays, vaporizers, and fumigators have been devised to remove nearly every nuisance caused by insects. Giving hormones to cattle and poultry for the purpose of accelerating their growth has been a discovery of economic importance. Water fluoridation, we are told, will save trips to the dentist, and doctored bread is more nutritious. Vanity, of course, has not been forgotten, and every woman knows today that she can find good looks in bottles and boxes. However, it is possible to have one's hair curled without going to the beauty parlor while reading this impassioned book. Much has been written on the effect of chemicals on wildlife, and it was time that someone investigated their effects on man. The author is a Fellow of the American

Institute of Chemists and the author of "Make Friends with Your Land" and "Gardening with Nature." What he has to say here is meant to be upsetting, and will bear a good deal of thought.

#### STRANGE CREATURES OF THE SEA

By A. Hyatt Verrill, L. C. Page, Boston, Mass., 1955. 83/4 x 6 in., 233 pp. Illustrated. Indexed. \$3.75.

Strange indeed are the sea animals described by Mr. Verrill with the same skill and accuracy that characterized his earlier books. This one deals with protozoans, plant-like creatures, worms, sponges, shellfish, lobsters, crabs, and other invertebrates from all over the world. Scientific terms are kept to a minimum while the basic facts about their life and their peculiar habits and attributes are described.

#### THE STRANGE WORLD OF NATURE

By Bernard Gooch, Thomas Y. Crowell, New York, 1955. 81/2 x 53/4 in., 160 pp. Illustrated, Indexed, \$3.00.

Under the broad headings of "The Animals Themselves," "The Animals' Approach to Life," and "Difficulties of Interpretation," this is a series of informative essays. Sea life, reptiles, worms, snails, birds, and mammals are the subjects of "believe it or not" aspects of natural history. Mr. Gooch has the rare

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#### ANIMAL CLOTHING

By George F. Mason, William Morrow, New York, 1955. 81/4 x 5 in., 94 pp. Illustrated. Indexed. \$2.00.

This book is an excellent addition to Mr. Mason's popular series on animals. In earlier volumes he has written about the tracks, homes, sounds, weapons, and tools of animals. This time he explains the different protective coverings that nature has provided to all living creatures — except man — to control body temperature or give protection against injury. Five chapters deal successively with hair, feathers, skin, armor, and chitin, or insect clothing.

#### MAN MEETS DOG

By Konrad Z. Lorenz, translated by Marjorie Kerr Wilson, Houghton Mifflin, Boston, 1955. 8½ x 5½ in., 211 pp. Illustrated. \$3.00.

Owners of dogs-and cats too-will be fascinated by this book written by one of the world's authorities on animal behavior. How these traditional pets became domesticated and how some of their ancestral wild habits have survived despite thousands of years of human training and security are explained with affection and humor.

#### A GUIDE TO THE BIRDS OF CEYLON

By G. M. Henry, Oxford University Press, London, 1955. 8½ x 5¼ in., 432 pp. Illustrated. Indexed. \$6.55.

As those who are familiar with Salim Ali's "Indian Hill Birds" will know, the author of this book is one of the outstanding bird painters of today. The 27 colored plates and numerous drawings which illustrate this volume are thus a pleasure to look at. But Mr. Henry, a member of the staff of the Colombo Museum, also has a gift for writing, and his account of the habits and behavior of the more than 400 species that occur in Ceylon is delightful to read. The student looking for a field guide will also find all the basic information, including descriptions, habitat, and breeding data, as well as local names. The endpaper maps should be most useful.

## TREES AND SHRUBS OF THE UPPER MIDWEST

By Carl Otto Rosendahl, University of Minnesota Press, Minneapolis, 1955. 101/4 x 7 in., 411 pp. Illustrated, Indexed. \$6.00.

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the scientific names have been brought up to date. While the area covered extends south from Manitoba through Minnesota, most of Wisconsin, the eastern part of the Dakotas, and parts of Iowa, Illinois, and upper Michigan, distribution of these plants in other parts of the country is also given.

#### SEA ISLANDS TO SAND HILLS

Photographs by Carl Julien, introduction by Chlotilde R. Martin, University of South Carolina Press, Columbia, 1954. 1114 x 834 in., 119 pp. \$7.50.

For those who know the South Carolina country, this beautiful volume will be a valued memento. For those who have never been there, the documented historical introduction and 80 superb black-and-white plates will be a starting point for what should be a most rewarding trip.

#### THE CAVES BEYOND: THE STORY OF THE FLOYD COLLINS CRYSTAL CAVE EXPLORATION

By Joe Lawrence, Jr., and Roger W. Bruckner, Funk & Wagnalls, New York, 1955. 91/2 x 61/2 in., 283 pp. Illustrated. \$4.75.

In 1954 the National Speleological Society organized an exploration of the unknown caverns that stretch beyond Crystal Cave, Kentucky. Sixty-four men and women participated, half of them living and moving in subterranean darkness for 160 hours-more than seven days. Some of these were scientists and technicians, but many others were amateur "cavemen": the roster includes a stenographer, a scenario writer, a draftsman, a dance instructor, a real-estate broker, a dog trainer, and a patent examiner, among others. This is the official record of the expedition. The narrative is enlivened by transcripts of telephone conversations which give an excellent idea of what so dangerous an exploit involves in the way of planning, minute timing, and strict discipline. Charles Mohr of the Audubon Center of Greenwich, Connecticut, an experienced speleologist, contributes the introduc-

#### HUMBOLDT: THE LIFE AND TIMES OF ALEXANDER VON HUMBOLDT 1769-1859

By Helmut de Terra, Alfred A. Knopf, New York, 1955. 8½ x 5¾ in., 386 pp. Illustrated. Indexed. \$5.75.

A modern biography of Humboldt — explorer, naturalist, humanist, and founder of scientific geography — has been long overdue. Readers of this thoroughly interesting book will be astonished, just as his contemporaries were,

by this "universal man" who contributed so much to anthropology, astronomy, botany, geology, meteorology, oceanography, physiology, and zoology. The author is himself a distinguished geographer and geologist.

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#### THE CATTLE EGRET IN AFRICA

Continued from Page 75

they must come around its southeastern corner to reach Lake Kivu. This same species of heron lives also on oceanic islands such as Mauritius and Sao Tome, where supposedly it is sedentary.

It must be some 12 or 15 years since I saw in a film shown at an A.O.U. meeting a white heron walking beside a cow in Florida in exactly the way a cattle egret would. When I inquired about it I was told that snowy egrets were known to do this. I am not aware that the little egret of Europe and Africa ever does.

The psychological bond between

cattle herons and large herbivores finds a close parallel in the vellow wagtails of the Old World. Here at Tshibati these wagtails have been spending their off-season in numbers and are now about to take their final departure for northern Europe. I could find but two in the pastures this morning. Cattle herons ride on the backs of elephants mainly while traversing high grass, to save themselves the effort of much flying. Elsewhere they walk on the ground or short grass in order to snap up insects. A couple of days ago we watched one kill and swallow (head first) a lizard about seven inches long. But grasshoppers are a favorite prey, ticks rarely eaten, and not greatly sought for. -THE END

## IN REMEMBRANCE OF DR. PALMER



On July 23, 1955, Dr. T. S. Palmer, of Washington, D. C., one of the long-time officers and directors of the National Audubon Society, died at 87 years of age. Dr. Palmer's association with the Society was as follows:

On January 30, 1905, at the first meeting of the National Association of Audubon Societies for the Protection of Wild Birds and Animals, Inc. (as the National Audubon Society was called then), the following officers were elected, by the Board of Directors, for a one-year term: President, William Dutcher; First Vice-President, John E. Thayer; Second Vice-President, Dr. Theodore S. Palmer; Secretary, T. Gilbert Pearson; Treasurer, Frank M. Chapman.

Dr. Palmer was on the Board of Directors at that time; when he was reelected as Second Vice-president at the October 1907 meeting of the N.A.A.S., he was again elected a member of the Board of Directors. He served as a director up until October, 1936 when he ended his services. This means he was a director for 31 years.

At the October, 1908 meeting of N.A.A.S., Dr. Palmer was elected *First* Vice-president, in which capacity he served until 1936.

In October, 1934, when Dr. Palmer was still serving as First Vice-president, Kermit Roosevelt was elected President, T. Gilbert Pearson became President Emeritus, and John H. Baker was elected Executive Director of the National Association of Audubon Societies.

In October, 1935 all officers, including Dr. Palmer, were re-elected, but in October, 1936, Dr. Palmer was succeeded as First Vice-president by William P. Wharton, and also ended his tenure as director at that time. Thus, he served both as an officer and as a director of the Society for 31 years. An account of Dr. Palmer's life will appear in a future issue of the *The Auk*, official publication of the American Ornithologists Union.—The Editor

#### GYRFALCON NOW PROTECTED IN SWEDEN

"From July 1 (1955) the gyrfalcon (Falco rusticolus) has received entire protection in Sweden. This measure was recommended in the resolutions made at the I.U.P.N. Assembly at Copenhagen in 1954." -p. 5, Bulletin, International Union for the Protection of Nature (I.U.P.N), December 1955.

#### KEY DEER PROTECTION

Approval of a public-land order withdrawing 71 acres of public land in Monroe County, Florida, on the lower Florida Keys, for use of the Fish and Wildlife Service as an addition to the National Key Deer Refuge, has been announced by Secretary of the Interior Douglas McKay.

This marks another forward step in the program for the protection of the diminutive Key deer which has been threatened with extinction through loss of its natural habitat on the Florida Keys.

The present population is approximately 112 animals. In 1951 the number was estimated to be 32.

Because the Key deer is not a migratory animal, it does not automatically come under federal jurisdiction. For this reason, the Federal Government can protect the animal only in areas that are declared refuge lands.

The National Key Deer Refuge was established on February 1, 1954, upon 915 acres of leased, privately owned land, as the result of a clause in the Interior Department's Appropriation Bill for 1954 which permitted the Fish and Wildlife Service to lease and manage lands within the natural habitat of the Key deer. Under refuge management the lands are protected from fire, vandalism, and illegal trespass. These leases, however, may be cancelled for any reason or at any time with but 90 days' notice.

Previously abundant, the Key deer have declined in numbers due to illegal hunting, highway fatalities, and the general encroachment of civilization. Because the species can retain its identity only in the habitat provided by the Florida Keys, no attempt has been made to transfer Key deer to other localities. The establishment of new breeding colonies, a practice often used with rare animals, has thus been ruled out in connection with Key deer conservation ef-

The National Key Deer Refuge also affords protection to the roseate spoonbill, frequently referred to as the pink curlew; the great white heron, the largest of the American herons; and the whitecrowned pigeon which has had its only home in the United States in these Keys where it nests in the mangroves,

-The Editor

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## Children's Books



By Dorothy Edwards Shuttlesworth

As SPRING makes its official appearance on the calendar, we are reminded that it is not only a season of the year, but a mood. It may be evoked at unexpected times, by music or poetry, or by sharing some new and delightful experience with a child. We may be reminded, too, that moods are important to children as well as to ourselves.

A test made recently to determine how violence seen at the theater or on T.V. screens affected the youngsters who watched it, showed interesting reactions. A film involving rather brutal action was shown to a group of children when they were in a particularly happy mood; when questioned afterward about the story they seemed to have been little impressed by it. Some time later this group was purposely made to feel resentful (they were given a spelling test containing many words that had not yet been included in their classwork). Almost immediately afterward they were shown a story of violence. This time discussion revealed that the angry, violent happenings of the film had struck some responsive chords; the young viewers remembered many details and reviewed the action with considerable keenness.

Here was one more bit of evidence that a child of sound emotional and mental health may see disturbing events without becoming disturbed inwardly. A child who is upset and unsure of himself is far more impressed by life's unhealthy aspects than one whose experiences and environment give him love and security. To the requirements for a sound personality we might add an understanding of the world of nature. Here violence plays a large part—from earthquakes and hurricanes to predatory animals which must take the lives of others in order to survive. Yet the fortunate child realizes that for all this destruction there is a sound "balance of nature" when man does not interfere, and there is a harmony among the planets and stars that is beyond the power of humans to disturb.

Numerals after titles indicate age groups

#### THE OCTOPUS (9-14)

By Olive L. Earle, William Morrow and Company, New York, 1955. 83/4 × 61/2 in., 64 pp. Illustrated by the Author. \$2.00.

The eight-armed cephalopod called "octopus" probably is regarded by most children of today in one of two different lights-both of them quite false. One popular conception is that the octopus is a super-villain of the oceans, ferocious and gruesome in action. Again, in comic cartoons, octopuses are seen as merry little fellows whose ample supply of limbs are mainly used for acrobatic dancing. Miss Earle's book brings a wealth of fact to dispel these inaccu-, racies. From the kind no larger than a man's hand to the huge kind found in the North Pacific, the many sizes and types of octopuses are discussed. Mostly they are timid and harmless; all have a fascinating method of propelling themselves through water-using the same

principle that operates a jet plane. Miss Earle, as she usually does in her nature books, uses page after page of illustrations to supplement the text. Although she is not afraid to occasionally use a rather technical word (such as "cirromatophore" in describing the variable color cell of an octopus), she writes with a simplicity that is appealing to all ages.

#### ALL ABOUT BIRDS (10-14)

By Robert S. Lemmon, Random House, New York, 1955. 91/4 x 7 in., 142 pp. Illustrated by Fritz Kredel. \$1.95.

"All About Birds" is not just another bird book; it is one that will make a youngster stop, look, and listen—opening his eyes to the wonders of the bird world. Although throughout the book Mr. Lemmon tells about certain specific birds and how to identify them, his emphasis is on the marvels of their structure (including a remarkably interesting description of feathers and flying mech-

anism), their migrations, nesting, and singing habits, and the surprisingly varied story of their eggs. A young reader's powers of observation should be considerably sharpened as the author points out various adaptations of feet. tails, bills, and mouths, and how despite their many differences, all birds have much in common. Practical hints are included on attracting birds to a suburban home and on caring for baby birds that have lost their parents. The delightful illustrations by Fritz Kredel. clear, well-spaced type and handsome design, make "All About Birds" an attractive volume.

#### NATURE QUIZ BOOK (10-16)

By Anne Orth Epple, The Platt and Munk Company, New York, 1955. 8 x 7 in., 122 pp. \$1.25.

As the rage for "quiz games" continues unabated, the "Nature Quiz Book" is something that will delight countless fun-loving and nature-loving families. It is skilfully arranged, with 26 questionnaires of 25 questions each. The questions, all dealing with plant and animal life, are interesting, and the answers are given at the back of the book. While arrangements are included for the owner to record his own scores in the book, suggestions are made for using the quizzes as a party activity for boys and girls.

#### INSECTS IN THEIR WORLD (10-up)

By Su Zan Noguchi Swain, Garden City Books, New York, 1955. 11½ x 8½ in., 53 pp. Illustrated by the author. \$2.50.

A problem for many children in fulfilling a desire for nature hobbies is the remoteness of subject material. For those living in cities and suburbs there are apt to be limitations unless they have parents with time and inclination to take them on bird walks, hunting mammal tracks and, in general, going far afield to obtain specimens or information. As Mrs. Swain points out, more than half of all living things (plants included) in the world are insects; almost anywhere it is a simple matter to observe numerous kinds, to collect "specimens," or to rear and keep alive an interesting variety. Her book is a persuasive and beautiful introduction to the insect world and its fascinating possibilities for fun and education. It will serve also as an identification guide since in it more than 150 insects are pictured in full color. Adults who present this book to youngsters are likely to find themselves borrowing it back again, perhaps to check on an unrecognized six-legged creature that has invaded home or garden, or to enjoy the exquisite presentation of butterflies, moths, and other of the more colorful insects.

THE ADVENTURE BOOK OF SHELLS (8-12) By Eva Knox Evans, Capitol Publishing Company, Irvington, New York. 10 x 71/4 in., 93 pp. Illustrated by Vana Earle. \$2.95 (with shell kit).

Here is a splendid new book for young beachcombers. And rare indeed is a child who can resist picking up the skeletons of the little sea-dwelling animals that are left on the shore by receding tides. But what is a shell, really? How did some soft-bodied creature create such a structure? Why is one shell so different from another? Endless questions are answered, simply and clearly, in "The Adventure Book of Shells." For identification, a picture guide is included in which dozens of specimens are included. Though not in color, so excellent is the photography and reproduction that any shell may be easily recognized. Advice on caring for a shell collection, on building and furnishing an aquarium, and on how to use shells for costume "jewelry," and decorations, add greatly to the book's value. The book may be purchased in a package with an attractive "beginner's" shell collection.

#### WOODY, THE LITTLE WOOD DUCK (8-10)

By Ivah Green and Alice Bromwell, Abelard-Schuman, Inc., New York, 1955. 83/4 x 61/2 in., 64 pp. Illustrated by George F. Mason. \$2.25.

When the little ball of golden fluff in grandpa's driveway proved to be a baby wood duck, apparently separated from his family, what could grandpa do but adopt him - and name him "Woody"? This is the beginning of a lot of fun for grandpa and his young neighbors as they try to build a nursery suitable for a baby wild duck and to find proper food for him. Their efforts are rewarded as Woody develops into a handsome, playful pet that will frolic with a dog as well as with people. Eventually, as an adult bird, he is banded by a conservation officer and taken to a lake where he joins others of his own kind. This is a delightful story to which George Mason has contributed immeasurably with drawings which make Woody a real personality.

#### THE CHIPPEWA INDIANS (8-12)

By Sonia Bleeker, William Morrow and Company, New York, 1955. 73/4 x 51/4 in., 157 pp. Illustrated by Patricia Boodell. \$2.00.

Increasingly, our attention is being directed to the status of Indians, the original residents of this continent. A desire to liberate them from second-class citizenship is growing, but such "liberation" is not a simple matter. To be successful it requires an understanding of the cultural backgrounds of the various tribes, a knowledge of how they fared at the hands of white settlers, and

the problems they encounter when they try to adjust to life outside a reservation. Sonia Bleeker's series of books on North American Indians is of inestimable value. First of all, they interest children in the traditional ways of the Indians, then add a factual account of their situation today. Her latest book gives a vivid picture of the Chippewa: a family gathered around the wigwam fire, their building of a canoe, the discovery of wild rice and maple sugar by the tribe, the training of medicine man and warrior. Boys and girls who enjoy this book and others of Miss Bleeker's Turn to next Page



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#### LIONS IN THE BARN (9-12)

By Virginia Frances Voight, Holiday House, New York, 1955. 734 x 534 in., 95 pp. Illustrated by Kurt Wiese. \$2.25.

Irresistible is the idea of a young boy lucky enough to have circus tigers, leopards, and "lions" boarding in his father's barn for the winter. Such, however, is the good fortune of Clay Baldwin in the fictional book "Lions in the Barn." Moreover with the jungle cats comes their trainer, Dobbinelli, and before the winter is far advanced. Clay is being trained by the expert to be a trainer himself, with a lion cub as his pupil. An exciting climax is reached, and a valuable lesson learned, when the cub escapes its cage. A good, lively tale, especially pleasing to animal-loving youngsters.

#### CALIFORNIA CAMEL ADVENTURE (10-14)

By Gladys Relyea Saxon, The Caxton Printers, Caldwell, Idaho, 1955. 8½ x 5¼ in., 183 pp. Illustrated by Helen Hughes Wilson. \$3.50.

A dramatic and colorful episode in American history is the background for this true-to-life story. Among the pioneers moving westward are Jonathan Wright and his family who emigrate from Ohio to Los Angeles. There, just a hundred years ago, debate raged over the advisability of having a camel corps in the United States Army. Jonathan is strongly pro-camel, especially after he has been given a baby black camel for himself. From then on life is a series of problems for the 12-year-old boy until his pride and joy pet solves the most serious one of all by discovering water on the parched desert land which the Wrights wish to make their home. While the Wright family is fictional, the scientific and historical background of the story are authentic. To boys and girls, camels and California seem an irresistible combination so far as interest-catching is concerned.

#### FIRE IN YOUR LIFE

By Irving Adler, The John Day Company, New York, N. Y., 1955. 81/2 x 6 in., 128 pp. Illustrated by Ruth Adler. \$2.75.

How fire proves a good servant but bad master is explained with a wealth of detail in this interesting volume. The ever-increasing use of fire over half a million years is traced and its destructive powers when uncontrolled, or when controlled as a weapon of war, are described. A most complete and attractive presentation of facts about a most important subject.

#### ANIMAL TALES FROM IRELAND (All ages)

By M. Grant Cormack, The John Day Company, New York, 1955. 91/2 x 61/2 in., 64 pp. Illustrated by Vana Earle. \$2.50.

This is strictly a fun book. It is composed of animal stories that have been woven into the background of Ireland's mythology and history. They "explain" all manner of things—from why no moles are to be found on the Emerald Isle to how frogs lost their voices. A particularly pleasant bit of reading for those who like to celebrate St. Patrick's day!

#### TWENTY DOLLAR HORSE (10-14)

By Gerald Raferty, Julian Messner, Inc., New York, 1955. 8½ x 5¾ in., 192 pp. Illustrated by Bernard Safran. \$2.75.

An excellent adventure story for children with a real affection for horses. Jack and Teddy are two teen-agers who manage to acquire Apache, a little pinto that had been abandoned by a carnival, for twenty dollars. How they restore it to good health, find a means of hous-

ing and feeding it and, by chance, discover some of the tricks it had learned in carnival days, are just a few of the events that make "Twenty Dollar Horse" an absorbing, wholesome tale.

#### THE ADVENTURE BOOK OF ROCKS (8-12)

By Eva Knox Evans, Capitol Publishing Company, Irvington, New York, 1955. 10 x 71/4 in., 93 pp. Illustrated by Vana Earle. \$2.50.

Rocks and minerals may impress many children (adults, too!) as formidable subjects for study. Miss Evans, however, with the informal touch she has applied to other sciences, presents them in a bright, appealing way that is sure to catch the attention of many a formerly disinterested youngster. Not only does she give a variety of interesting facts about how rocks were created and how they were used by primitive peoples. but she describes the fun and fundamentals of rock collecting as a hobby. Simple tests for identifying specimens are described, and steps for setting up a personal collection are suggested.

## Trumpeter Swan Population Declines

The United States population of trumpeter swans was down to 590 birds in 1955, a drop of 52 below the 1954 total of 642, according to an announcement by Secretary of the Interior Douglas McKay.

This total includes 495 adult birds and 95 cygnets, or young swans. In 1935, there were only 73 of the swans, by actual count.

The 10th anual aerial census of these swans was made on August 29, 30, and 31, 1955, by personnel of the Fish and Wildlife Service and the National Park Service. During this time all areas where these graceful white birds are known to exist in this country were covered. The 1955 census, as in previous years, was conducted at the conclusion of the breeding season in order that the young birds might be included in the country.

Several hundred other trumpeter swans are known to exist in Canada, in British Columbia, and western Alberta. This group is widely separated in range from the birds in the United States. Another group has been reported in recent years from southern Alaska. This is thought to be a segment of the Canadian population. —The Editor

#### THE FLORIDA GRASSHOPPER SPARROW-Continued from Page 71

stood beside the camera, near the nest, while taking additional photographs. While I was near her, I tried to see how closely I could get without flushing the bird. Finally I placed my fingers on the rim of the nest without causing the bird to leave. Unfortunately I did not photograph this evidence of the bird's trust, as I should have done. I believe I could have touched her; undoubtedly she would have left the nest if I had tried to, and she might even have broken the eggs in

her hurried departure. I never found another bird which allowed me to take photographs of her, as this trusting grasshopper sparrow did.

The usual nests were placed on the ground alongside of scrub palmettoes. Even though I found many nests, it was necessary to fine-comb the area, looking carefully at almost every bit of vegetation, in order to discover them. Unfortunately I did not find a nest with young at which I could film the mother bird feeding them.

—THE END

#### When Baby Goes Birding

One of the most unique problems connected with bird-watching is that of the young mother whose bird-watching is seemingly curtailed upon the arrival of her baby. My husband and I have solved this problem with a modern adaptation of the authentic Indian papoose board. With it, we transport young Susan to wooded areas, mountains, the seashore, and wherever bird-seeking might take us. The child enjoys this method of travel and has the advantage of early contact with the new and wonderful out-of-doors.



Photograph of Mrs. Gurnee and baby.

Susan rides comfortably and safely in the papoose carrier. She is secured in place by means of laces which are covered with outer flaps closed with a zipper. A sturdy, curved oak band at the top of the board protects her head. The rhythm of walking is pleasing for the baby, as is the clear and unimpaired vision possible from her position in the board. An arm-carried baby never experiences such a view of its surroundings.

In this modern world, more and more educated and progressive people find that some of the age-old methods survive well the marks of time. This, obviously, is one of them; for we have found the "squaw board" is a convenient, safe, and practical carrier for the outdoor mother of today.

MRS. JEANNE GURNEE Tenafly, New Jersey

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By Edmund J. Sawyer. Cranbrook Institute of Science, Bloomfield Hills, Michigan 1955, 564

gan, 1955, 50é.

THE BIRDS OF BRITISH COLUMBIA:

(3) The Shorebirds
By C. J. Guiget. British Columbia Provincial Museum, Victoria, B. C., 1955. 50¢.

BIRDS OF NEW ZEALAND By Alfred M. Bailey. Denver Museum of Natural History, 1955 (Museum Pictorial Series, No. 11)

AN EVALUATION OF THE RED FOX By Thomas G. Scott. Illinois Natural History Survey Division, Urbana, 1955.

FERNS AND FLOWERING PLANTS OF THE AUDUBON CENTER, GREENWICH, CONNECTICUT

By Leonard J. Bradley, Published by the Center, 1955, \$1.00.

GUIDE TO THE SEA SHORE AT LONG BEACH ISLAND, NEW JERSEY
Prepared and published by the Caribou
Press, Bronxville, N. Y., 1955. 50¢. HOW TO COLLECT SHELLS:

By Members of the American Malaco-logical Union, Margaret C. Teskey, Sec-retary, P. O. Box 238, Marinette, Wisconsin. \$1.00.

A LIST OF BIRDS SEEN NEAR TULSA By Members of the Tulsa Audubon So-ciety, Donald L. Norling, President, 204 South Florence, Tulsa, Oklahoma, 1954.

RED FOXES AND A DECLINING PREY POPULATION

By Thomas G. Scott and Willard D. Klimstra. Southern Illinois University. Carbondale, Illinois, 1955 (Monograph Series No. 1). \$2.00.

HISTORY AND NATURE GUIDE TO BUCK HILL FALLS, PA.

Prepared and published by Caribou Press, Bronxville, N. Y., in consultation with Thomas H. Knepp and Richmond E. Myers for the Buck Hill Falls Company. 1955.

ABC's OF CAMP MUSIC By Janet E. Tobitt. Available from the Girl Scout Equipment Service, 155 East 44th Street, New York 17, N. Y. 1955. 75¢.

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## HOW CHILDREN By Shirley Miller

#### Origin of Arbor Day

With spring on the threshold of the whole continent: with birds returning by the millions to their favorite nesting spots, and with the trees putting forth their first green garb, it's high time to plan some special celebration in honor of these events. So let's turn our thoughts to ARBOR DAY and BIRD DAY.

Both these have become traditions throughout the country, Arbor Day was first inaugurated in Nebraska in 1872 by J. Sterling Morton when he inspired the residents of that treeless state to plant 1,006,000 trees on April 10; also to set aside one day each April as Arbor (or tree-planting) Day. In doing this he stated "Other holidays repose upon the past: Arbor Day proposes for the future." In 1885, Nebraskans officially named April 22 (Morton's birthday) as Arbor Day each year, and in the decades that have followed the 2,000,000,000 trees, which have been planted in Nebraska, mostly by school children, on that date, have become a living memorial to Morton's vision. Now every state in the union officially celebrates Arbor Day-some on specific days each year and some by yearly proclamation of the various state governors-and a "World Festival of the Trees" has been proposed by the Honorable M. D. Chaturvedi of India.

#### Origin of Bird Day

Twenty-two years after Mr. Morton's constructive action. Charles A. Babcock,

Superintendent of Schools of Oil City, Pa., wrote Mr. Morton (then Secretary of Agriculture) of his wish to observe a Bird Day also. Mr. Morton gave this his "cordial approval" and on May 4. 1894, under Babcock's guidance, the school children of Oil City celebrated the first Bird Day with special exercises. This was continued each year and publicity about it caught the imagination of bird enthusiasts throughout the country so that now the majority of states also designate one day each spring as Bird Day. Many states combine Arbor Day and Bird Day—appropriately too, for who can visualize a tree without a songbird, or vice versa?

Going one step further in these spring festivals, thousands of school children also take advantage of the fact that the great artist-naturalist, John James Audubon, was born on April 26, 1785, and include commemorative programs in his honor in their Arbor and Bird Day celebrations. This year the National Audubon Society has designated April 22-28 as AUDUBON WEEK.

#### An Arbor-Bird-Day Project

Now, in March, is a good time to start planning with the children of your community for a lively and constructive activity that can be climaxed in the observance of these three events. We believe that Messrs. Morton, Babcock, and Audubon would be enthusiastic about the idea of directing this activity toward establishing bird and tree sanctuaries in likely spots — your school grounds, perhaps, or some bare area that

Illustration by Heidi Heino.



would add beauty and value to your town by a wise planting program that might be a continuing project, year after year.

We suggest that you enlist the interest of your town leaders in this idea—your mayor, the superintendent of schools, your park and recreation departments, the garden and service clubs, editors of your newspapers, and directors of your radio and TV stations. Enlist the interest of your nurserymen, too, for they will be able to give invaluable advice about the proper kinds of trees and shrubs to select for the best results in your soil and climate. Most important enlist the interest of your children. They'll be your best boosters!

To create widespread enthusiasm, have the children write essays in their school work on "Why Our Town Should Have a Bird and Tree Sanctuary," and encourage their teachers to submit the best ones to your newspapers for publication. Perhaps your local nurserymen may wish to contribute some, or alk of the trees for a sanctuary planting to the school whose child writes the best essay. Include in the official tree-planting ceremony in April or May, when the sanctuary is dedicated, the children who wrote the best essays. Your newspapers will probably want to have a reporter and photographer on hand for this climaxing program, and this would also provide a newsworthy event for your radio and TV stations to broadcast.

As a suggestion for long-time interest, have the children keep calendars of birds and other animals for the area you select. It will be thrilling to them to note how the wildlife increases as the trees and shrubs take hold, and grow.

#### Helpful References

If you wish detailed information for planting your sanctuaries, and for celebrating Arbor-Bird-Audubon Day, we refer you to the following:

"Songbirds In Your Garden," by John K. Terres (Thos. Y. Crowell Co., New York City, 1953—\$3.95), especially the chapter on "Ornamental Plantings for Birds," which contains detailed charts on regional and seasonal plantings for the birds.

"Birds In the Garden," by Margaret McKenny (Grosset and Dunlap, New York City, 1939-\$3.95) lists trees and shrubs of value to birds.

"Trees and Shrubs for Birds In Your Garden," by Mrs. Avery Rockefeller. 8-page leaflet-10¢

(All the above may be purchased through the Service Department of the National Audubon Society.)

"Bulletin to the Schools" on Arbor and Wild Life Day, (published annually by the New York State Education Department, Albany, New York-10¢). Let us help you find that Book

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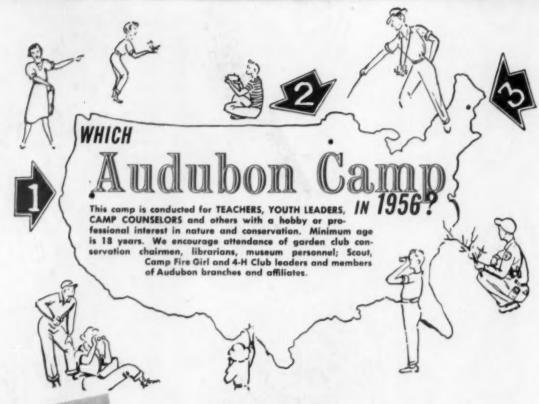
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